FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

DRAFT ENVIRONMENTAL IMPACT STATEMENT
HOUSING HELP, INC.
PROPOSED DEVELOPMENT OF MATINECOCK COURT

VOLUME II – APPENDICES C THROUGH K

HAMLET OF GREENLAWN
TOWN OF HUNTINGTON
SUFFOLK COUNTY, NEW YORK

MARCH 2005
REVISED FEBRUARY 2006

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DEPARTMENT OF PLANNING
AND ENVIRONMENT

List of Appendices

VOLUME I

Appendix A	-	Correspondence dated April 8, 2005 from Richard Machtay, Director of Planning – Town of Huntington (with all attachments); Correspondence dated May 18, 2005 from Kenneth D. Fine, AICP (for Richard Machtay) – Town of Huntington (with all attachments); Positive Declaration; Full Environmental Assessment Form prepared by Town; and Stipulation of Settlement
Appendix B	-	Property Survey, Site Development Plans (15 Sheets), Condominium Map and Preliminary Construction Schedule

VOLUME II

Appendix C	-	Phase I Environmental Site Assessment (dated February 1994) by Bienstock, Lucchesi & Associates, P.C., NYSDEC Spills Incident report, and Groundwater Model and Study prepared by Camp, Dresser & McKee
Appendix D	-	Correspondence to the Eastern Paralyzed Veterans Association (EPVA)
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Appendix K	-	Site Photographs, Section –Elevation A-A' and Architectural Drawings (floor plans and elevations for the residential buildings, community center and the sewage treatment plant building)

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DEPARTMENT OF PLANNING
AND ENVIRONMENT

APPENDIX C

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROPERTY AT

INTERSECTION OF PULASKI AND ELWOOD ROADS
EAST NORTHPORT, NEW YORK

PREPARED FOR

HOUSING HELP INC.

FEBRUARY 1994

BIENSTOCK, LUCCHESI & ASSOCIATES, P.C.
Consulting Engineers

AMITYVILLE, NEW YORK

Bienstock, Lucchesi & Associates, P.C.

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LARRY A. RUBINSON, P.E.
KENNETH CUOMO

OFFICES IN:
• PARSIPPANY, NEW JERSEY
• WALLINGFORD, CONNECTICUT

February 16, 1994

Housing Help
91-101 Broadway
Greenlawn, New York 11740

ATT: MR. DOUGLAS ALOISE
EXECUTIVE DIRECTOR

RE: PHASE I ENVIRONMENTAL AUDIT
PULASKI & ELWOOD ROADS PARCEL

Dear Mr. Aloise:

Enclosed please find two (2) copies of the environmental audit prepared for the 14.7 acre parcel located at the intersection of Pulaski and Elwood Roads.

The audit has been completed as described in our proposal dated January 3, 1994.

Should you have any questions or wish to meet to discuss information in this report, please feel free to contact this this office.

We trust that the enclosed will meet with your satisfaction.

Very truly yours,

BIENSTOCK, LUCCHESI & ASSOCIATES, P.C.

Michael P. Chiarelli, P.E.
Vice President

Linda F. Ginsburg
Chemist

MPC/LFG:ea
602-01.2L
Enclosure

134 BROADWAY • AMITYVILLE, NEW YORK 11701-2704 • (516) 691-2020
FAX NO. (516) 691-8780

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SECTION 1.0

INTRODUCTION

1.0 INTRODUCTION

Bienstock, Lucchesi and Associates was retained by Housing Help Inc. to perform a Phase I Environmental Site Audit to identify significant and apparent environmental conditions at a parcel of land located at the northwest corner of Pulaski and Elwood Roads, East Northport, New York and to offer recommendations concerning those conditions. The environmental assessment is predominantly based on the following:

a) Site Reconnaissance
A visual inspection of the site and the surrounding neighborhoods was performed on January 29, 1994 to ascertain apparent site conditions and note the presence/absence of positive indicators of environmental hazards or contamination. Present site use as well as operations in the surrounding environs were also noted.

b) Environmental Records Research
A review was made of all pertinent Federal, State, County and Local environmental records, readily available under the Freedom of Information Act, to ascertain the existence of previous and present environmentally significant site conditions. The records search was extended to include an area within a one mile radius of the Housing Help site.

c) Hydrogeological Evaluation
A review of documents available from the Soil Conservation Service and the Suffolk County Department of Health Services was researched for hydrogeological conditions present on site and in the immediate vicinity of the site. Potential contaminant transport to the subject site via groundwater was considered.

d) Historical Evaluation
A search of available historic information from Sanborn Fire Insurance Maps was made to assess the history and usage of the subject site. Documents from the Town of Huntington were also reviewed.

e) Findings Evaluation
Generally accepted engineering and other technical criteria was employed to evaluate the collected data and render conclusions and develop recommendations as to the condition of the site with respect to significant environmental contamination or adverse environmental impacts.

Bienstock, Lucchesi & Associates, P.C.
134 Broadway
Amityville, New York 11701

MEMORANDUM

TO: Harvey Bienstock, P.E.
Joseph A. Lucchesi, P.E.
Frank M. Russo, P.E.
Linda F. Ginsburg

FROM: Michael P. Chiarelli, P.E.

DATE: March 2, 1994

SUBJECT: A. W. Realty Audit

Arnold Wolowitz loved our Housing Help Audit. He showed me a similar one done by Dan Middleton's firm - for $1,200.

We got the A. W. Realty Audit for $1,400 - not $1,750 as asked. It places us at the early stages of this project but we have got to learn to do these audits at a competitive price - not the $2,277 @ 2.73 Housing Help final #.

Please return book to MPC.

MPC:pd
1-48L

PS - Linda - Dan Middleton's book didn't have originals or pictures - they were black and white but appeared to be excellent photo copies of originals. Maybe this can save some $

1.1 Purpose of the Audit

Bienstock, Lucchesi and Associates performed the audit as a precursor to the purchase of the designated property, defined in Section 1.0 Introduction, by Housing Help Inc. for use as the site for a family housing complex.

The findings of this Phase I Audit will determine the presence of foreseeable environmental hazards at the site or the lack of evidence of the existence of any environmental condition which would be cause for concern. It will establish the need for further investigation should environmental concerns be found onsite.. Any further investigation than is contained in this document would be undertaken as part of a Phase II Audit.

1.2 Limitations and Exceptions

For the purposes of the Phase I investigation, no water, groundwater, air or soil testing was performed. There were no subsurface investigations of any sort undertaken. There were no investigations made as to regulations, code compliance or zoning compliance for the proposed use of the site. In addition, there were no Gauss meter readings taken to determine the presence of a strong electromagnetic field caused by the Lilco high tension wires located directly north of the property. Property lines were not identified in the field.

The scope of the audit is as detailed in the proposal made to Housing Help, Inc. on January 3, 1994.

The findings are therefore, limited in nature and may represent only a portion of the possible findings. Any further investigation at the site would be undertaken in a Phase II audit if the findings warrant or should Housing Help request a continued investigation.

1.3 Limiting Conditions

For the purposes of this investigation, the site is considered to be the 14.7 acre parcel located on the northwest corner of the intersection of Pulaski and Elwood Roads.

The neighboring areas researched consisted of those locations which fell within a one mile radius from the Housing Help parcel.

At the time of the preparation of this report, we have not received clarification from the Long Island Railroad as to the use of pesticides along the right-of-way of the rail lines. As soon as that information is obtained, it will be forwarded to Housing Help as an addition to this report.

SECTION 2.0

SITE DESCRIPTION

2.0 SITE DESCRIPTION

2.1 Site Location

The site is located on the northwest corner of the intersection of Pulaski and Elwood Roads, East Northport, New York. The site is identified in the Town of Huntington records as the parcel located at Section 114, Lot 7, Block 4, District 400. Photographs of the site and vicinity are included in Appendix A.

2.2 Site and Vicinity Characteristics

The site is situated in a area marked by residential developments and educational facilities. Additional facilities located within the designated one mile radius from the site include in the main, service stations and automobile repair operations, small businesses such as printing operations and dry cleaners, the East Northport Highway Department and one large business, the Hazeltine Corp. Photographs in Appendix A show different views of the site and surrounding environment.

Directly north of the site, there is an existing Lilco power station with transformers mounted on stanchions. Behind the Lilco station are Long Island Railroad tracks. Appendix A photographs show the Long Island Railroad tracks and the Lilco power station.

North of the Long Island railroad tracks is Northport High School. On the opposite side of Elwood Road, east of the site is located the Pulaski Road Elementary School.

2.3 Description of Site

The site is vacant and undeveloped. There are no existing structures on the site nor does it appear that structures were present on the site at any time in the recent past. The site is clear of trees. The major vegetation is brush which was minimal probably due to the time of year the inspection was undertaken. Historically, the site had been used as a farm but the site shows no evidence of recent cultivation.

The site has some trees along Pulaski Road (southern end of the property) and also some on the northern end which serve as a buffer between the Lilco power station and the site. No trees are found in the interior of the site.

There is an interior dirt roadway which allows access to the site and cuts from the center of the site to the westernmost area and then transverses the northern edge of the site along the Lilco property before ending back at the center of the site. The entrance to the roadway system is from Pulaski Road. This roadway is the only evidence of development on site.

The records indicate that the property was not used for industrial business nor commercial operations. Previously, the land was cultivated for farming but is not being farmed at the present.

Sanborn Geographic Information Systems records were reviewed to determine past significant activities at the subject site. Sanborn Maps typically indicate areawide historical development of construction including materials usage.

A check of the historical Sanborn Fire Insurance Maps indicates that no maps were ever prepared for the subject site or the surrounding area; therefore, the only historical record of previous use stands with the Town.

The property is currently unused and stands in the undeveloped state as described in Section 2.3.

2.5 Proposed Use of the Site

The proposed use of the property is as the site for a development of an affordable family housing community. The project, to be entitled Matinecock Court, consists of 181 housing units comprised of one, two, three and four bedroom typical units. The housing is set on the 14.6 acre site and covers 14% of the available acreage. Recreational facilities and green space have also been included in the design.

2.6 Current Uses of Adjoining Sites

Directly north of the site is a Lilco power station, behind which is located the Long Island Railroad tracks and further north the Northport High School property. West of Northport High School is property owned by BOCES. This is the site of the Wilson Technical facility. Figure 1, Area Plan, shows the location of the power station, the railroad, and the high school as well as other landmarks with reference to the site.

Immediately to the northeast is the Pulaski Road Elementary School. Further east on both the north and south sides of Pulaski Road are residential housing units. Larkfield Road which is situated at the eastern end of the study area has a business district in which are located small businesses.

A Mobil gas station is located on the south side of Pulaski Road at the intersection of Pulaski and ELwood Roads. Further south is residential housing. Directly west of the site is additional residential housing.

The entire area is spotted with automobile service stations which based on the ERIS report comprise the majority of the local generators of hazardous waste. The service stations are also owner/operators of underground storage tanks for petroleum products. The ERIS report is found in Appendix B.

SECTION 3.0

HYDROGEOLOGICAL CONDITIONS

3.0 HYDROGEOLOGICAL CONDITIONS

The hydrogeology of the subject site was investigated for the following reasons:

1. To estimate the groundwater flow direction and velocity.
2. To identify general soil characteristics in both the aeration zone and the saturation zone.
3. To determine the potential for contaminant transport to the subject site from upgradient sources.

3.1 General Hydrogeological Conditions

A hydrogeological cross section reveals that the study area is generally characterized as unconsolidated glacial deposits of the pleistocene era to a depth of about 700 feet below sea level where it is underlain by bedrock. Figure 2 shows the hydrogeological cross section of Long Island.

As is typical of Long Island, the groundwater reservoir is comprised of three principle aquifers. Beginning at a depth of 40 feet below grade, about 40 feet above mean sea level, is the unconfined upper glacial aquifer whose thickness varies from about 100 feet to 200 feet in this region. Below the glacial aquifer is the Magothy aquifer to a depth of about 400 feet below mean sea level. A varying thickness impermeable clay layer underlying the Magothy aquifer is called Raritan clay. This forms an impermeable barrier over the third principle aquifer, the Lloyd aquifer, which extends to a depth of about 700 feet below sea level. Below the Lloyd aquifer is bedrock. Suffolk County Stratigraphy and Hydrogeological units are shown in Figure 3.

The soil column above the water table, also known as the aeration zone has relevance in this study and is comprised of soils classified as Haven and Riverhead series by the United States Soil Conservation Service.

These series consist of deep, well-drained, medium-textured soils formed in a loamy or silty mantle over stratified coarse sand and gravel. In the western part of Suffolk County, the areas of this soil mapping are very large.

The soils found on site are suited to most grasses and shrubs. The response of plants in this soil type to applications of fertilizer is good.

As identified by the Long Island Comprehensive Waste Treatment Management Plan 208 Study, the subject site is situated in Hydrogeological Zone 1 which is classified as a "water supply sensitive area for deep groundwater recharge." The depth to groundwater at the site is approximately 50 feet below mean sea level. The direction of groundwater flow is directly north from the subject site towards the Long Island Sound at a rate of three feet per day. Figure 4 shows the groundwater contours.

4.0 RECORDS REVIEW

As part of this Audit , a research of readily available environmental records was conducted. Through the Freedom of Information Act and the use of an environmental research firm, ERIS, Environmental Risk Information and Imaging Services, Bienstock, Lucchesi & Associates was able to gain access to certain Federal, State, County and Local records relevant to the subject site. The search area was that area contained within a mile radius of the subject site. Section 4.1 contains the listing of sources used by this firm as part of their environmental information search.

4.1 Standard Environmental Record Sources

United States Environmental Protection Agency

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)
The CERCLIS list is a compilation of known or suspected uncontrolled or abandoned hazardous waste sites. These sites are either under investigation or have been investigated by the USEPA.

Office of Justice Department (DOCKET)
The civil enforcement docket tracks civil judicial cases filed on behalf of the USEPA by the Department of Justice.

Emergency Response Notification System (ERNS)
The national computer database system that is used to store information on the sudden or accidental release of hazardous substances.

The Facility Index System (FINDS)
The Finds report is a computerized inventory of all facilities that are regulated or tracked by the USEPA.

The National Priorities List (NPL)
The NPL report, also known as the superfund list, is an EPA listing of uncontrolled or abandoned hazardous waste sites.

The US Nuclear Regulatory Commission (NUCLEAR)
The Nuclear report is a listing of all licensed and active nuclear power plants in the United States.

USEPA Office of Solid Waste & Management (OPENDUMP)
The OPENDUMP report lists any facility where solid waste is disposed that is not a sanitary landfill or is not a facility for the disposal of hazardous waste.

Resource Conservation and Recovery Information System (Large Quantity Generators) (RCRIS LG)
RCRIS LG report contains information pertaining to facilities that generate more than 1000 kg per month of hazardous waste.

Resource Conservation and Recovery Information System (Small Quantity Generators) (SG)
RCRIS SG report contains information pertaining to facilities that generate between 100 kg and 1000 kg per month.

Resource Conservation and Recovery Information System (Treatment, Storage and Disposal Facilities) (RCRIS TS)
The RCRIS TS report contains information on facilities that treat, store or dispose of hazardous waste.

Toxic Release Inventory System (TRI)
The TRI report contains information on the industrial release and/or transfer of toxic chemicals as reported under Title III of SARA

New York Department of Environmental Conservation

Chemical Bulk Storage Report (CBS)
The CBS report contains information pertaining to facilities that store regulated substances in aboveground storage tanks with capacities of 185 gallons or more.

Hazardous Waste Manifest System (HWMN)
The HWMN report contains information on facilities that either transport, generate or store hazardous materials.

New York Inactive Hazardous Waste Disposal Site List (HWS)
The HWS list contains summary information pertaining to those facilities that are deemed hazardous by the New York State Department of Environmental Conservation.

Major Oil Storage Facilities (MOSF)
The MOSF report contains summary information on all petroleum storage facilities in excess of 400,000 gallons.

Petroleum Bulk Storage Report (PBS)
The PBS contains summary information on petroleum storage facilities in excess of 1,100 gallons but less than 400,000 gallons.

New York Solid Waste Facilities Register (SWF)
The SWF is a comprehensive listing of all solid waste landfills operating in the state of New York.

New York Spills Report (SPILLS)
SPILLS is a summary listing of all reported spills that have occurred in New York State since 1985.

Suffolk County Department of Health Services

Suffolk County Department of Health Services database (SCDHS) The SCDHS computerized access to all facilities on record as treating, storing or disposing of hazardous waste. Data also includes information obtained from Article 12 on the records of facilities in Suffolk County which have above ground and underground storage tanks. These records also indicate all facilities which have recorded spills.

Town of Huntington

The records of the Tax Assessor, Planning Board, Town Clerk and Environmental Commission pertaining to sites within the Town of Huntington.

4.2 Additional Records Source

Long Island Lighting Company

The Long Island Lighting Company was contacted to verify the presence or absence of PCB contaminated cooling oils in the transformers found in the adjoining parcel to the north.

Metropolitan Transit Authority (Long Island Railroad)

The Long Island Railroad offices were contacted to confirm whether pesticides had been used at any time along the railroad right of way which is situated due north of the site behind the Lilco power station.

SECTION 5.0

FINDINGS

5.0 FINDINGS

5.1 Site Findings

The results of the ERIS report indicate that research of all available sources show no past history of environmental incident; no recorded spills; no above or underground storage tanks; no active environmental permits.

Based on available information and visual site inspection, Bienstock, Lucchesi & Associates is abl to conclude that there is no obvious potential for contamination from any past or present onsite activity.

5.2 Hydrogeological Findings

It has been determined that the existing hydrogeological conditions pose no significant environmental risk to this project.

Groundwater beneath the site is flowing north to the Long Island Sound. Depth to groundwater is about 50 feet below grade based on information from the Suffolk County Department of Health Services.

According to the results of the environmental records search, there is one recorded instance of a spill at a residence, 0.2 miles southwest of the site. The total spill was one gallon of fuel occurring in March of 1992. At a point 0.48 miles further southwest of the site, 50 gallons of petroleum products were spilled in July, 1986. These sites are the only sites with recorded spills that are topographically and hydrogeologically upgradient of the subject site; and due to the nature and size of the spills, it can be concluded that neither spill will significantly impact the quality of the groundwater beneath the site.

5.3 Offsite Findings

Based upon information obtained from area reconnaissance and record research, there is no evidence of any potential for contamination of the site from offsite facilities. Those sites located during the record search which are listed as treatment, storage and disposal of hazardous waste or who are large or small quantity generators of hazardous waste are not upgradient of the subject site and therefore will not adversely impact the subject site.

Lilco has informed this office that transformers containing PCBs are no longer in use at Lilco facilities. There might be minor cross contamination of transformers due to filling operations; however, there has never been a recorded spill at the Elwood Road facility. It is the belief of a Lilco representative that PCB contamination would not be a problem at this site. In addition, the Lilco facility is downgradient from the subject site so all minor spills would travel in the direction of groundwater flow which is away from the Housing Help site.

There is no specific data available on the strength of the electromagnetic field at the subject site. Lilco will perform gauss readings which are a measure of electromagnetic strength upon request to determine the strength of the field. At present, most of the available readings have been performed inside structures at the owners request. There are known harmful effects from high Gauss readings. For humans, the main concern would be the potential of heating tissue. The threshold of concern is usually readings in excess of one gauss. Medical studies are inconclusive as to the major effects of long term exposure. The distance of the Lilco lines from the site and the height of the towers moderate the impact of the electromagnetic field. It is recommended that Lilco be asked to the site to perform a Gauss reading just to assure the owners that the readings fall within acceptable boundaries.

5.4 Records Review Findings

The results of the search through all the databases listed in Section 4.1 indicate that the subject property is not listed on any available database.

The results of the database search for facilities which are found within the one quarter mile radius indicate two (2) facilities with spills, one (1) small quantity generator of hazardous waste and one (1) facility tracked on the FINDS system.

The results of the database search for facilities which are found within the one half mile radius indicate two (2) facilities with spills.

The results of the database search for facilities which are found within the one mile radius indicate eleven (11) large quantity generators, seven (7) small quantity generators, eight (8) facilities with leaking underground storage tanks, twelve (12) facilities on the hazardous waste manifest system and fifteen (15) facilities on the SPILLS list.

The complete detailed information on these facilities is contained in the ERIS Report found in Appendix B.

As can be seen, the majority of the facilities lie almost one mile from the subject site. This is beyond the range of immediate impact. The majority of the spills were extremely minor in nature, not requiring an emergency response form State, County or local officials, produced no long term negative impacts and were not hydraulically upgradient of the subject site.

Based on the information found from the environmental records review, the site should not be significantly impacted negatively from any past or current offsite operation.

SECTION 6.0

SUMMARY

6.0 SUMMARY

This report has been prepared by Bienstock, Lucchesi & Associates for use by Housing Help Inc. as a guidance and informational aid regarding possible adverse environmental conditions at or around the subject parcel of property.

The purpose of the report was to identify apparent and significant environmental conditions at the subject site within the context of the scope of services as stated in our January 3, 1994 proposal of services.

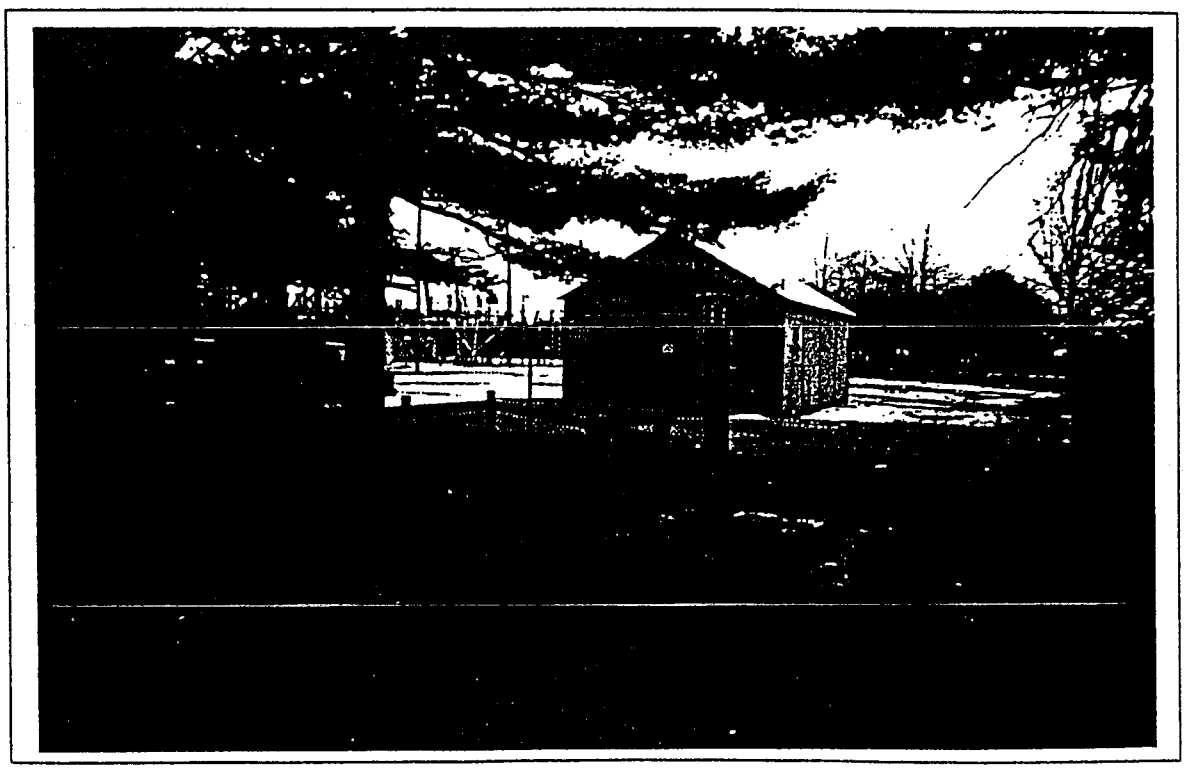
These services as outlined in Section 1.0 of this Audit were performed with due diligence. Based on our evaluation of the available data and the results of the site visitation, we do not foresee any situation of conern from existing environmental conditions and therefore, we do not see the need to continue the audit process with a Phase II investigation and report.

APPENDICES

APPENDIX A

PHOTOGRAPHS

PHOTOGRAPH # 1



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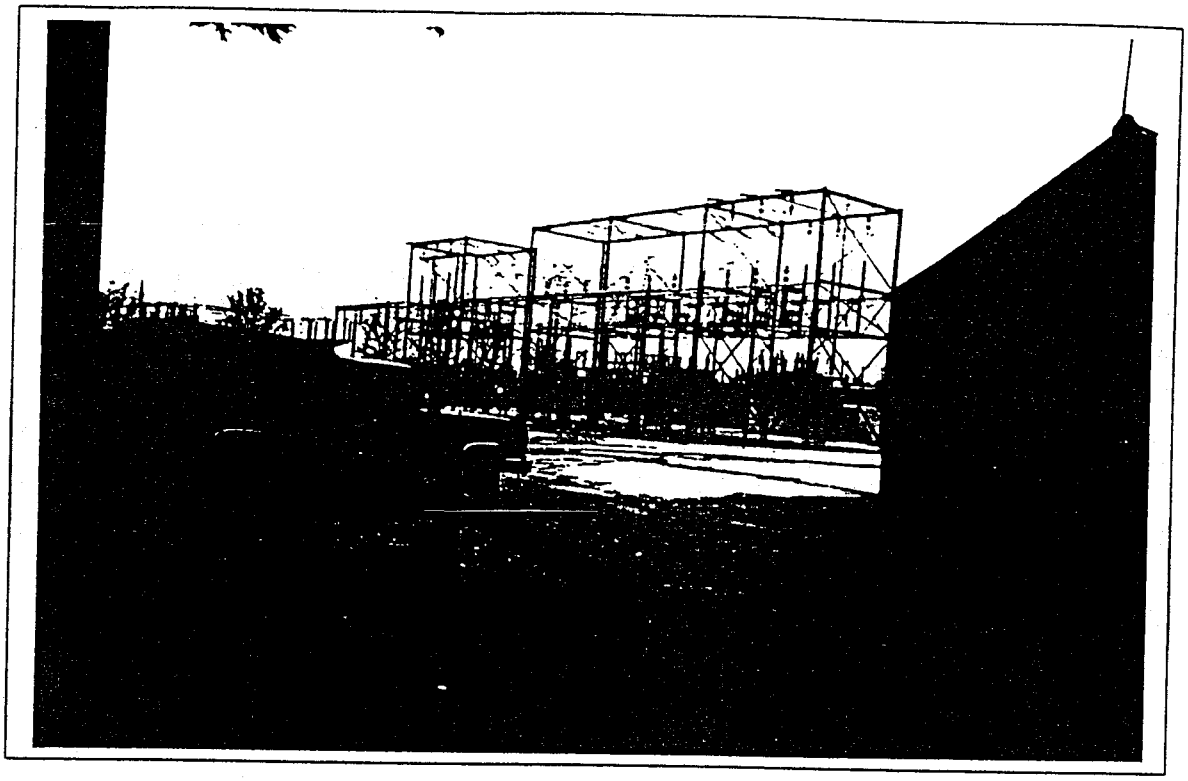

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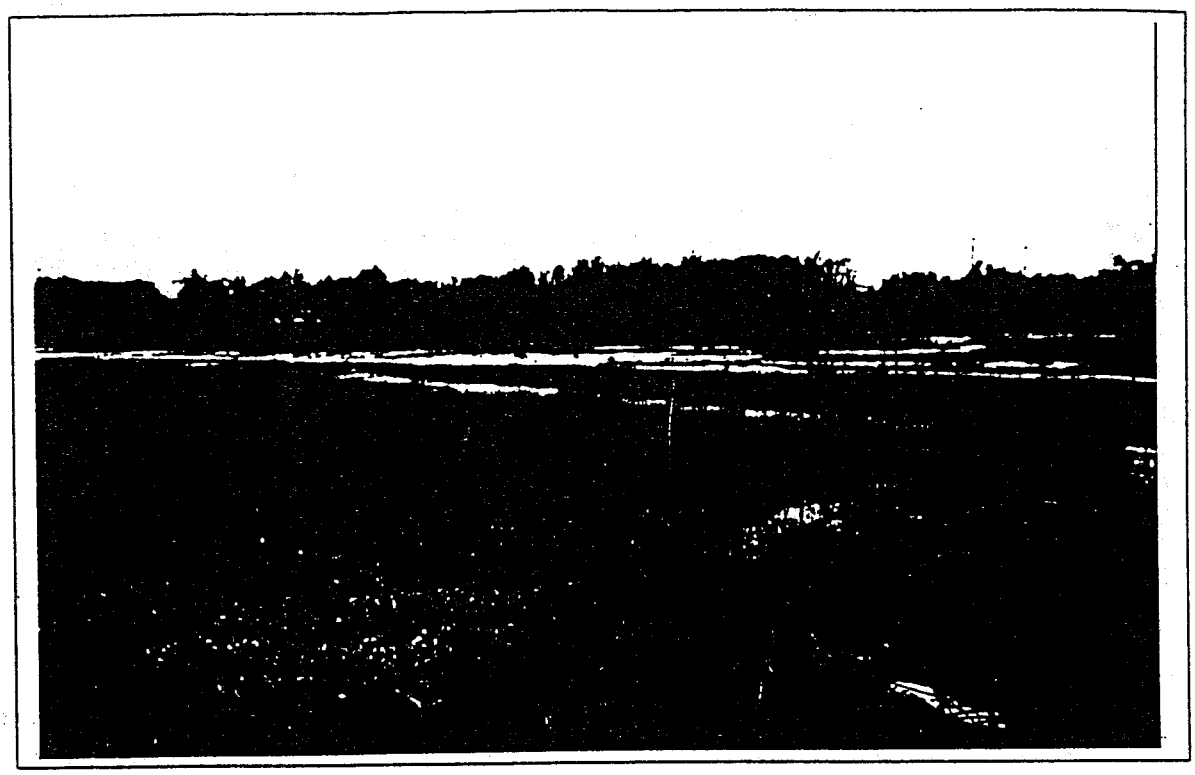
PHOTOGRAPH # 4



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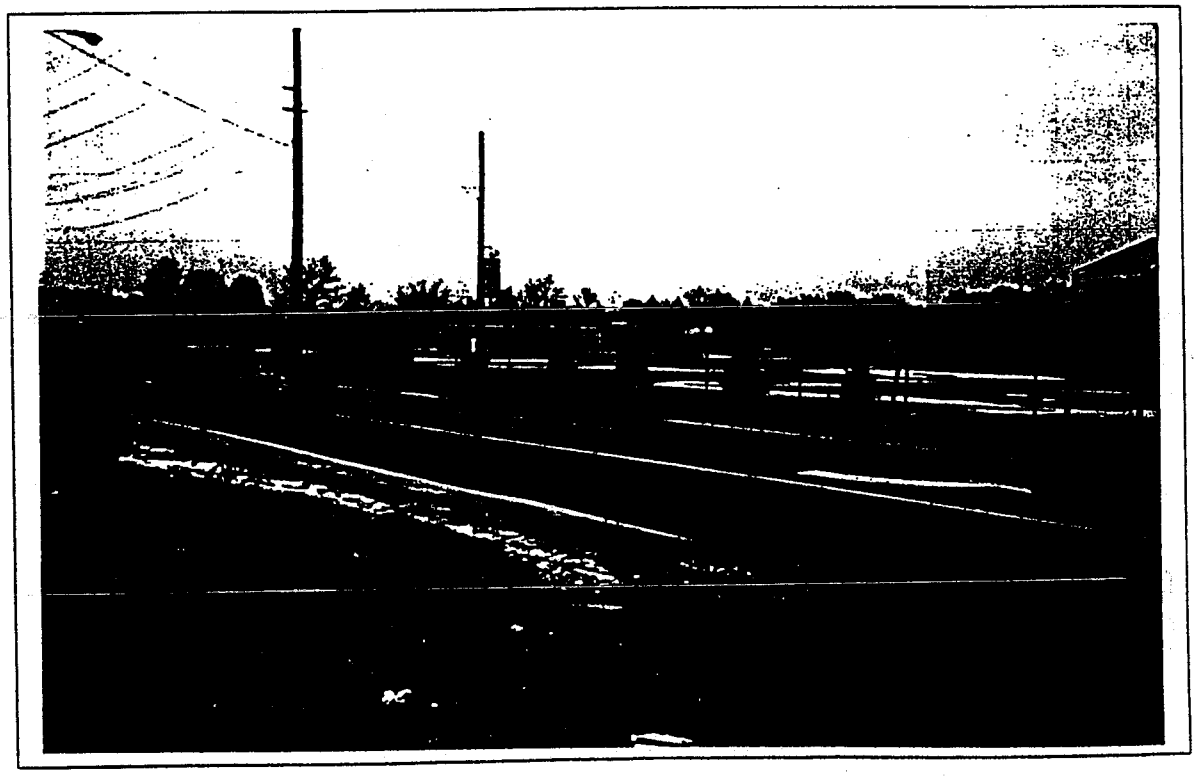

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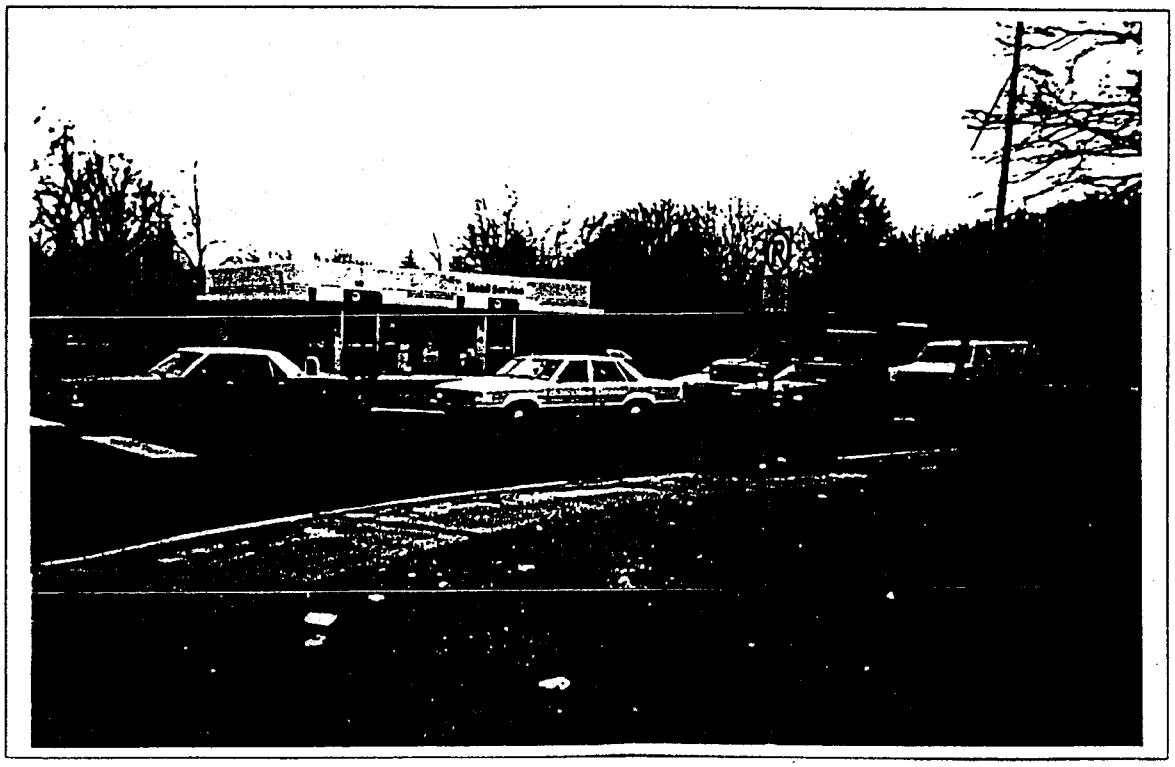

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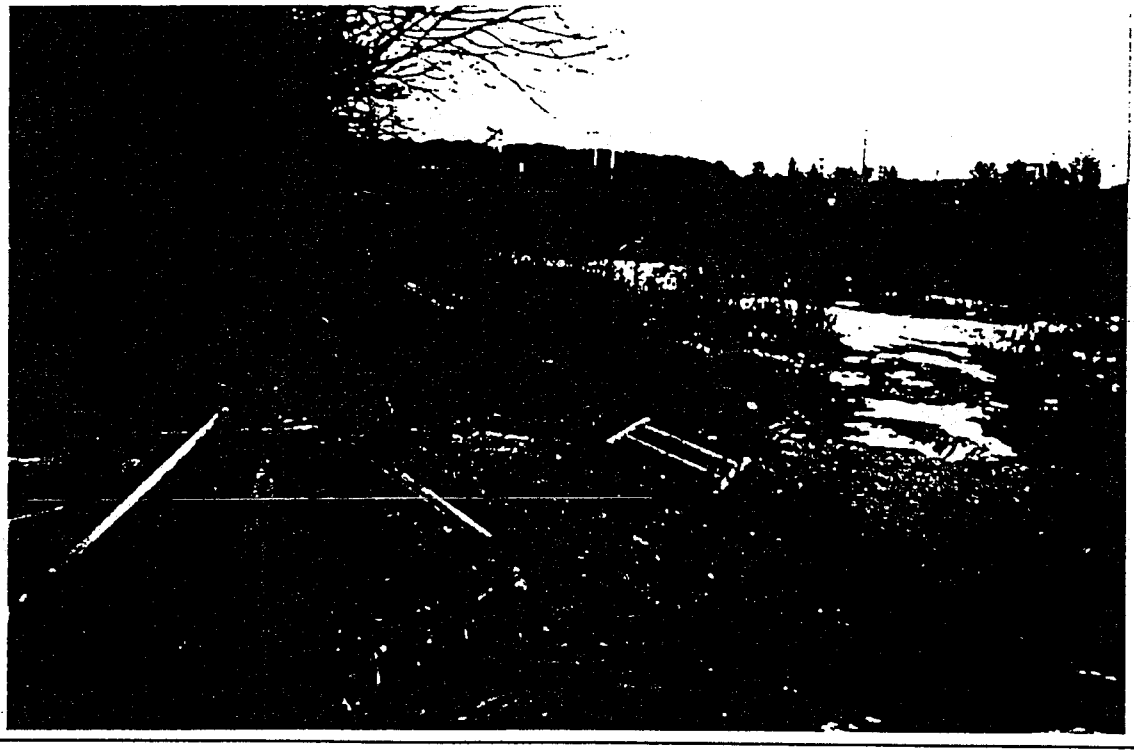
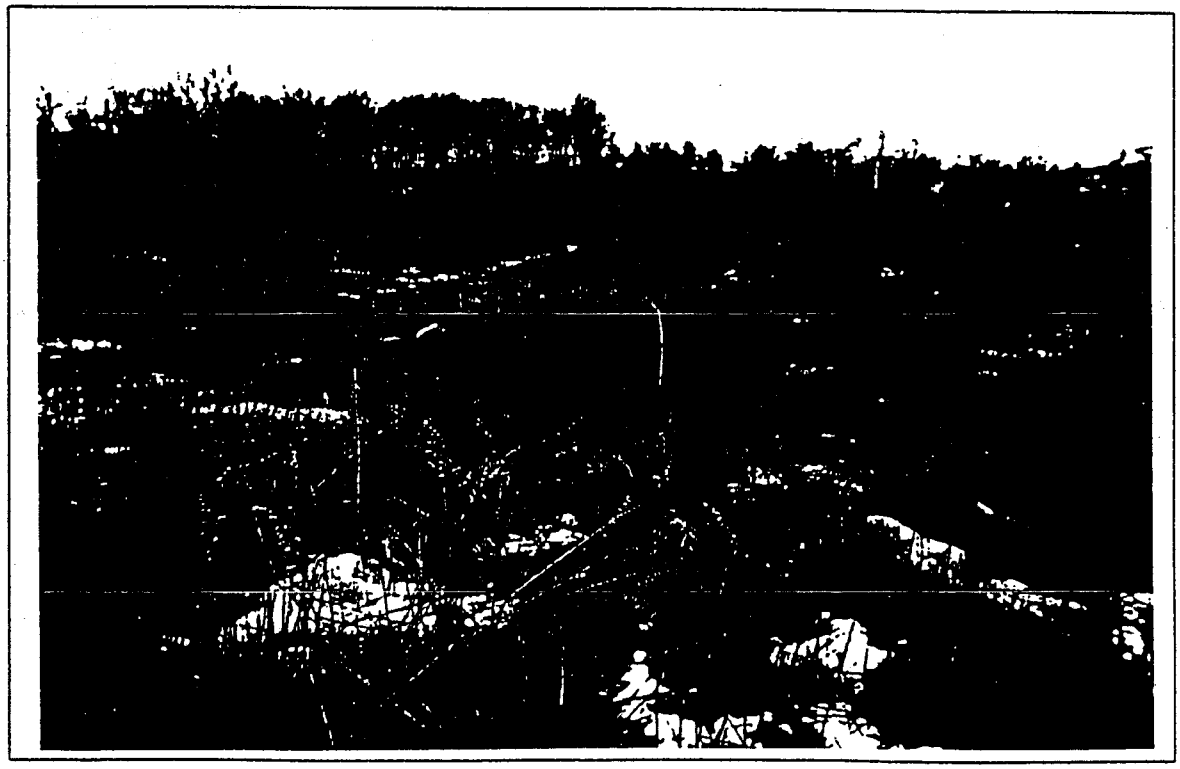


PHOTOGRAPH # 9

PHOTOGRAPH # 10

PHOTOGRAPH # 11

PHOTOGRAPH # 12



PHOTOGRAPH # 13

APPENDIX B

ERIIS REPORT

ERIS

PERTAINING TO: NORTHWEST CORNER
PULASKI AND ELWOOD
EAST NORTHPOINT, NY

ON BEHALF OF: BIENSTOCK,LUCCHESI & ASSOC.
134 BROADWAY
AMITYVILLE, NY 11701

PREPARED ON: 01/31/1994

REPORT NUMBER: 38967

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ERIIS RADIUS REPORT STATISTICAL PROFILE
State: NY

RIIS Report #38967

Jan 27, 1994

Site: NORTHWEST CORNER
PULASKI AND ELWOOD
EAST NORTHPOINT, NY

Latitude: 40.875358
Longitude: -73.340346

Database	Radius (Mi)	Property	Property-1/4	1/4-1/2	1/2-1	>1	TOTAL
NPL	1.000	NO	0	0	0		0
CERCLIS	1.000	NO	0	0	0		0
TRI	1.000	NO	0	0	0		0
RCRIS_TS	1.000	NO	0	0	0		0
RCRIS_LG	1.000	NO	0	0	11		11
RCRIS_SG	1.000	NO	1	0	7		8
DOCKET	1.000	NO	0	0	0		0
ERNS	1.000	NO	0	0	0		0
FINDS	.2500	NO	1				1
NUCLEAR		NR	NR	NR	NR	NR	0
OPENDUMP		NR	NR	NR	NR	NR	0
CBS	1.000	NO	0	0	0		0
MOSF	1.000	NO	0	0	0		0
PBS	1.000	NO	0	0	0		0
LST	1.000	NO	0	0	8		8
SWF	1.000	NO	0	0	0		0
HWS	1.000	NO	0	0	0		0
HWMN	1.000	NO	0	0	12		12
SPILLS	1.000	NO	2	2	15		19
			4	2	53	0	59

election of PROPERTY records requires an accurate street address in the ERIIS job order.

blank radius count indicates that the database was not searched by this radius per client instructions.

R in a radius count indicates that the database cannot be reported by this search criteria due to insufficient nd/or inaccurate addresses reported by a federal/state agency.

ERIIS DATABASE DESCRIPTIONS

ıtabase:	CERCLIS	Date:	10/19/1993
ɔurce Agency:	US Environmental Protection Agency Office Of Solid Waste And Emergency Response		
'hone:	202/260-2131		
Description:	Comprehensive Environmental Response, Compensation, And Liability Information System. The CERCLIS List Is A Compilation Of Known Or Suspected Uncontrolled Or Abandoned Hazardous Waste Sites. These Sites Have Either Been Investigated, Or Are Currently Under Investigation By The EPA For The Release, Or Threatened Release Of Hazardous Substances. Once A Site Is Placed In CERCLIS, It May Be Subjected To Several Levels Of Review And Evaluation And Ultimately Placed On The National Priorities List.		
Database:	DOCKET	Date:	07/20/1993
˜ource Agency:	US Environmental Protection Agency Office Of Enforcement		
. hone:	202/260-2614		
Description:	The Civil Enforcement Docket Is The U.S. Environmental Protection Agency's System For Tracking Civil Judicial Cases Filed On The Agency's Behalf By The Department Of Justice. This Report Contains Information On Cases From 1972 To The Present.		
)atabase:	ERNS	Date:	12/30/1992
˜ource Agency:	US Environmental Protection Agency Office Of Solid Waste And Emergency Response		
hone:	202/260-7731		
)escription:	Emergency Response Notification System. ERNS Is A National Computer Database System That Is Used To Store Information On The Sudden And/Or Accidental Release Of Hazardous Substances, Including Petroleum, Into The Environment. The ERNS Reporting System Contains Preliminary Information On Specific Releases, Including The Spill Location, The Substance Released, And The Responsible Party. Please Note That The Information In The ERNS Report Pertains Only To Those Releases That Occured During 1992.		
ɟatabase:	FINDS	Date:	06/15/1993
ource Agency:	US Environmental Protection Agency Office Of Information Resources Management		
ʼhone:	703/557-2985		
ʼescription:	Facility Index System. The Finds Report Is A Computerized Inventory Of All Facilities That Are Regulated Or Tracked By The U.S. Environmental Protection Agency. These Facilities Are Assigned An Identification Number Which Serves As A Cross-Reference For Other Databases In The EPA's Program System. Each Finds Record Indicates The EPA Program Office That Is Responsible For The Tracking Of The Facility.		
ʼatabase:	NPL	Date:	10/19/1993
ource Agency:	US Environmental Protection Agency Office Of Solid Waste And Emergency Response		
,one:	202/260-3046		
ʼescription:	National Priorities List. The NPL Report, Also Known As The Superfund List, Is An EPA Listing Of Uncontrolled Or Abandoned Hazardous Waste Sites. The List Is Primarily Based On A Score That A Site Receives From The EPA's Hazardous Ranking System. These Sites Are Targeted For Possible Long-Term Remedial Action Under The Superfund Act.		
ɜtabase:	NUCLEAR	Date:	01/01/1993
ɔurce Agency:	US Nuclear Regulatory Commission Permits Section		
hone:	301/492-7000		
ɜscription:	Nuclear Power Facilities. The Nuclear Report Is A Comprehensive Listing Of All Licensed And Active Nuclear Power Plants In The United States.		

ERIIS DATABASE DESCRIPTIONS

Database: OPENDUMP
Source Agency: US Environmental Protection Agency
Office Of Solid Waste And Emergency Response
Phone: 202/260-4687
Description: Open Dumps Report.
The Resource Conservation And Recovery Act Defines The Term "Open Dump" To Mean "...Any Facility Or Site Where Solid Waste Is Disposed Of Which Is Not A Sanitary Landfill Which Meets The Criteria Promulgated Under Section 4004 And Which Is Not A Facility For The Disposal Of Hazardous Waste." Thus, Any Facility Which Fails To Comply With Any One Element Of The Criteria Is Considered To Be An Open Dump.
Date: 01/01/1990

Database: RCRIS_LG
Source Agency: US Environmental Protection Agency
Office Of Solid Waste And Emergency Response
Phone: 202/260-4697
Description: Resource Conservation And Recovery Information System - Large Quantity Generators.
The RCRIS_LG Report Contains Information Pertaining To Facilities That Either Generate More Than 1000kg Of Hazardous Waste Per Month Or Meet Other Applicable Requirements Of The Resource Conservation And Recovery Act.
Date: 08/03/1993

Database: RCRIS_SG
Source Agency: US Environmental Protection Agency
Office Of Solid Waste And Emergency Response
Phone: 202/260-4697
Description: Resource Conservation And Recovery Information System - Small Quantity Generators.
The RCRIS_SG Report Contains Information Pertaining To Facilities That Either Generate Between 100kg And 1000kg Of Hazardous Waste Per Month Or Meet Other Applicable Requirements Of The Resource Conservation And Recovery Act.
Date: 08/03/1993

Database: RCRIS_TS
Source Agency: US Environmental Protection Agency
Office Of Solid Waste And Emergency Response
Phone: 202/260-4697
Description: Resource Conservation And Recovery Information System - Treatment, Storage, And Disposal Facilities.
The RCRIS_TS Report Contains Information Pertaining To Facilities That Either Treat, Store, Or Dispose Of Hazardous Waste.
Date: 08/03/1993

Database: TRI
Source Agency: US Environmental Protection Agency
Office Of Pollution Prevention And Toxics
Phone: 202/260-3757
Description: Toxic Release Inventory System Of 1991.
The TRI Report Contains Information On The Industrial Release And/Or Transfer Of Toxic Chemicals As Reportable Under Title III Of The Superfund Amendments And Reauthorization Act Of 1986 (Sara Title III).
Date: 12/31/1991

Database: CBS
Source Agency: NY Dept. Of Environmental Conservation
Spill Prevention And Response Section
Phone: 518/457-7363
Description: The New York Chemical Bulk Storage Report Contains Information Pertaining To Facilities That Store Regulated Substances In Aboveground Storage Tanks With Capacities Of 185 Gallons Or Greater, And/Or Underground Storage Tanks Of Any Size.
Date: 09/01/1993

Database: HWMN
Source Agency: NY Dept. Of Environmental Conservation
Hazardous Waste Manifest Section
Phone: 518/457-6858
Description: The New York Hazardous Waste Manifest Report Contains Summary
Date: 04/10/1993

Information Pertaining To Facilities That Either Transport, Generate, Or Store Hazardous Materials.

atabase: HWS
ource Agency: NY Dept. Of Environmental Conservation
Hazardous Waste Remediation Division
Phone: 518/457-3446
escription: The New York Inactive Hazardous Waste Disposal Sites List Contains Summary Information Pertaining To Those Facilities That Are Deemed Hazardous By The New York Department Of Environmental Conservation (NYDEC). Further, This List Is The ASTM Equivilant Of A State Hazardous Waste Sites List.
Date: 04/01/1993

atabase: LST
Source Agency: NY Dept. Of Environmental Conservation
Spill Prevention And Response Section
ione: 518/457-7363
escription: The New York Leaking Storage Tank Report Is A Comprehensive Listing Of All Reported Leaking Underground Storage Tanks Within The State Of New York. Information For This Database Was Extracted From The New York Spills Database.
Date: 09/01/1993

atabase: MOSF
Source Agency: NY Dept. Of Environmental Conservation
Spill Prevention And Response Section
ione: 518/457-7363
escription: The Major Oil Storage Facilities Report Contains Summary Information On Facilities With Petroleum Storage Capacities In Excess Of Four Hundred Thousand Gallons.
Date: 09/01/1993

atabase: PBS
ource Agency: NY Dept. Of Environmental Conservation
Spill Prevention And Response Section
Phone: 518/457-7363
escription: The New York Petroleum Bulk Storage Report Is A Comprehensive Listing Of All Reported Facilities That Have Petroleum Storage Capacities In Excess Of 1100 Gallons, And Less Than Four Hundred Thousand Gallons.
Date: 04/01/1993

atabase: SWF
ource Agency: NY Dept. Of Environmental Conservation
Division Of Solid Waste
hone: 518/487-2051
escription: The New York Solid Waste Facility Register Is A Comprehensive Listing Of All Permitted Solid Waste Landfills Currently Operating Within The State Of New York.
Date: 02/12/1993

atabase: SPILLS
ource Agency: NY Dept. Of Environmental Conservation
Spill Prevention And Response Section
hone: 518/487-7363
escription: The New York Spills Report Is A Summary Listing Of All Reported Spills That Have Occured In The State Of New York Since April 1, 1986.
Date: 09/01/1993

ERIIS SUMMARY OF RADIUS SITES

ERIIS Report #38967

Jan 27, 1994

ERIIS ID.	FACILITY/ADDRESS	DATABASE	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
36021068729	CHARLES BONGIORNO RESIDEN 240 ELWOOD RD EAST NORTHPORT, NY 11731-2213 COUNTY: SUFFOLK	SPILLS	0.092 Mi	NORTHEAST	8729
36021015227	RESIDENCE 22 CHERRY ST EAST NORTHPORT, NY 11731-2207 COUNTY: SUFFOLK	SPILLS	0.193 Mi	SOUTHWEST	5227
36008008378	MOBIL OIL CORP SS #LW6 200 ELWOOD RD EAST NORTHPORT, NY 11731-2209 COUNTY: SUFFOLK	RCRIS_SG	0.238 Mi	NORTHEAST	8378
36003031416	MOBIL OIL CORP SS #LW6 200 ELWOOD RD EAST NORTHPORT, NY 11731-2209 COUNTY: SUFFOLK	FINDS	0.238 Mi	NORTHEAST	1416
36021029341	UNK. 777 PULASKI RD GREENLAWN, NY 11740-1710 COUNTY: SUFFOLK	SPILLS	0.457 Mi	SOUTHWEST	9341
36021043293	DELAVIS SOD FARM 440 PULASKI RD EAST NORTHPORT, NY 11731-2136 COUNTY: SUFFOLK	SPILLS	0.498 Mi	NORTHEAST	3293
36008000989	STEIN MICHAEL A DDS 761 PULASKI RD GREENLAWN, NY 11740-1710 COUNTY: SUFFOLK	RCRIS_SG	0.514 Mi	SOUTHWEST	989
36007004160	COMPUTER CONVERSIONS CORP 6 DUNTON CT EAST NORTHPORT, NY 11731-1704 COUNTY: SUFFOLK	RCRIS_LG	0.547 Mi	NORTHEAST	4160
6058009311	COMPUTER COVERSIONS CORP. 6 DUNTON CT EAST NORTHPORT, NY 11731-1704 COUNTY: SUFFOLK	HWMN	0.547 Mi	NORTHEAST	9311
6021020492	LILCO 6 DUNTON CT EAST NORTHPORT, NY 11731-1704 COUNTY: SUFFOLK	SPILLS	0.547 Mi	NORTHEAST	492
6059008442	BAUMAN & SON BUS 24 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 COUNTY: SUFFOLK	LST	0.548 Mi	NORTHEAST	8442
36021059448	BAUMAN BUS 24 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 COUNTY: SUFFOLK	SPILLS	0.548 Mi	NORTHEAST	9448
36058019455	BAUMANN BUS CORPORATION 24 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 COUNTY: SUFFOLK	HWMN	0.548 Mi	NORTHEAST	9455
36021008591	KRAUSE RESIDENCE 33 OLEANDER DR NORTHPORT, NY 11768-3465 COUNTY: SUFFOLK	SPILLS	0.559 Mi	NORTHWEST	8591
3059016476	TECH AIR 10 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 COUNTY: SUFFOLK	LST	0.572 Mi	NORTHEAST	6476
3059005321	DOLBER RESIDENCE 45 OLEANDER DR NORTHPORT, NY 11768-3465 COUNTY: SUFFOLK	LST	0.575 Mi	NORTHWEST	5321
3058020472	AMOCO OIL COMPANY 246 PULASKI RD EAST NORTHPORT, NY 11731-2441 COUNTY: SUFFOLK	HWMN	0.644 Mi	NORTHEAST	472
6021030335	HUFCO 309 7TH ST EAST NORTHPORT, NY 11731-2824 COUNTY: SUFFOLK	SPILLS	0.663 Mi	SOUTHEAST	335
6008002534	DE PASQUALE FRANCIS L DDS 110 PULASKI RD EAST NORTHPORT, NY 11731-2420 COUNTY: SUFFOLK	RCRIS_SG	0.728 Mi	NORTHEAST	2534
021008010	UNK 66 CATHERINE ST EAST NORTHPORT, NY 11731-1321 COUNTY: SUFFOLK	SPILLS	0.739 Mi	NORTHEAST	8010

ERIIS SUMMARY OF RADIUS SITES

ERIIS Report #38967

Jan 27, 1994

RIIS ID.	FACILITY/ADDRESS	DATABASE	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
36058019888	EAST NORTHPORT HIGHWAY DEPARTMENT 509 2ND ST EAST NORTHPORT, NY 11731-2406 COUNTY: SUFFOLK	HWMN	0.790 Mi	SOUTHEAST	98E
36008007778	EAST NORTHPORT HIGHWAY DEPT 509 2ND ST EAST NORTHPORT, NY 11731-2406 COUNTY: SUFFOLK	RCRIS_SG	0.790 Mi	SOUTHEAST	7778
6059003797	TOWN OF HUNTINGTON 509 2ND ST EAST NORTHPORT, NY 11731-2406 COUNTY: SUFFOLK	LST	0.790 Mi	SOUTHEAST	3797
6021059580	EAST NORTHPORT F.D 1 9TH AVE EAST NORTHPORT, NY 11731-1822 COUNTY: SUFFOLK	SPILLS	0.796 Mi	NORTHEAST	9580
6007010177	AMOCO OIL COMPANY PULASKI AND LARKFIELD RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	RCRIS_LG	0.803 Mi	NORTHEAST	177
16007012532	AMOCO SERVICE STATION 246 PULASKI RD & LARKFIELD RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	RCRIS_LG	0.803 Mi	NORTHEAST	2532
16021023222	UNK LARKFIELD RD & PULASKI RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	SPILLS	0.803 Mi	NORTHEAST	3222
16021007548	BRIGHTSIDE B.P LARKFIELD RD & BRIGHTSIDE EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	SPILLS	0.808 Mi	NORTHEAST	7548
3007002258	SHERA CLEANERS 32 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	RCRIS_LG	0.808 Mi	NORTHEAST	2258
3058013969	SHERA CLEANERS 32 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	HWMN	0.808 Mi	NORTHEAST	3969
3021008960	UNK LARKFIELD RD & BRIGHTSIDE EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	SPILLS	0.808 Mi	NORTHEAST	8960
6058018615	PROVENSANO SERVICE CENTER 30 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	HWMN	0.809 Mi	NORTHEAST	8615
6007011470	PROVENZANO SERVICE CENTER 30 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	RCRIS_LG	0.809 Mi	NORTHEAST	1470
6058003055	BRIGHTSIDE AUTO BODY INC 12 BRIGHTSIDE AVE EAST NORTHPORT, NY 11731-1904 COUNTY: NASSAU	HWMN	0.849 Mi	NORTHEAST	3055
1008004304	BRIGHTSIDE AUTO BODY INC. 12 BRIGHTSIDE AVE EAST NORTHPORT, NY 11731-1904 COUNTY: SUFFOLK	RCRIS_SG	0.849 Mi	NORTHEAST	4304
1008006063	LEE DAE W DDS 184 LARKFIELD RD EAST NORTHPORT, NY 11731-1830 COUNTY: SUFFOLK	RCRIS_SG	0.850 Mi	SOUTHEAST	6063
1058013964	CADILLAC CLEANERS 15 HEWITT SQ EAST NORTHPORT, NY 11731-2519 COUNTY: SUFFOLK	HWMN	0.854 Mi	NORTHEAST	3964
8059016665	MATTYUNES RESIDENCE 414 2ND AVE EAST NORTHPORT, NY 11731-3401 COUNTY: SUFFOLK	LST	0.860 Mi	SOUTHEAST	6665
3021013114	CHRIS DEE RESIDENCE 407 2ND AVE EAST NORTHPORT, NY 11731-3403 COUNTY: SUFFOLK	SPILLS	0.878 Mi	SOUTHEAST	3114
3021044884	NORTHCO GAS STATION LARKFIELD RD & 5TH AVENUE EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	SPILLS	0.885 Mi	SOUTHEAST	4884

ERIIS SUMMARY OF RADIUS SITES

ERIIS Report #38987

Jan 27, 1994

RIIS ID.	FACILITY/ADDRESS	DATABASE	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
3007000465	SUNOCO SERVICE STATION 310 LARFIELD & FIFTH AVE E NORTHPORT, NY 11731 COUNTY: SUFFOLK	RCRIS_LG	0.885 Mi	SOUTHEAST	465
36007010361	SUNOCO SERVICE STATION 310 LARKFIELD RD & 5TH AVE EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	RCRIS_LG	0.885 Mi	SOUTHEAST	361
8021008433	MR. WALTERS/RELIANCE UTIL 10 CORRAL LN EAST NORTHPORT, NY 11731-3412 COUNTY: SUFFOLK	SPILLS	0.902 Mi	SOUTHEAST	8433
8008008379	MOBIL OIL CORP SS #MGN 236 LARKFIELD RD EAST NORTHPORT, NY 11731-1830 COUNTY: SUFFOLK	RCRIS_SG	0.903 Mi	SOUTHEAST	8379
3007012758	SHELL OIL CO 245 LARKFIELD RD EAST NORTHPORT, NY 11731-1829 COUNTY: SUFFOLK	RCRIS_LG	0.914 Mi	SOUTHEAST	2758
36058022639	SHELL OIL COMPANY 245 LARKFIELD RD EAST NORTHPORT, NY 11731-1829 COUNTY: SUFFOLK	HWMN	0.914 Mi	SOUTHEAST	2639
36007011877	LAUREL SERVICE CENTER 69 LAUREL RD EAST NORTHPORT, NY 11731-1433 COUNTY: SUFFOLK	RCRIS_LG	0.930 Mi	NORTHEAST	1877
36058018277	LAUREL SERVICE CENTER 69 LAUREL RD EAST NORTHPORT, NY 11731-1433 COUNTY: SUFFOLK	HWMN	0.930 Mi	NORTHEAST	8277
1021044757	LILCO CREST DR & VERNON VALLEY EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	SPILLS	0.930 Mi	NORTHEAST	4757
1058001865	ROBERT M KUBECKA INC. 41 BRIGHTSIDE AVE EAST NORTHPORT, NY 11731-1903 COUNTY: SUFFOLK	HWMN	0.947 Mi	NORTHEAST	1865
1059009583	ST ANTHONY'S OF PADUA R.C 20 CHESHIRE PL EAST NORTHPORT, NY 11731-2503 COUNTY: SUFFOLK	LST	0.947 Mi	SOUTHEAST	9583
18059009582	ST. ANTHONY OF PADUA CHUR 20 CHESHIRE PL EAST NORTHPORT, NY 11731-2503 COUNTY: SUFFOLK	LST	0.947 Mi	SOUTHEAST	9582
16008002536	DAVIS SAMUEL P DDS 1023 PULASKI RD EAST NORTHPORT, NY 11731-1931 COUNTY: SUFFOLK	RCRIS_SG	0.958 Mi	NORTHEAST	2536
16007013033	LOUDON LTD DBA MM PRESS 281 LARKFIELD RD EAST NORTHPORT, NY 11731-2417 COUNTY: SUFFOLK	RCRIS_LG	0.964 Mi	SOUTHEAST	3033
058022363	MINUTE MAN PRESS D/B/A 281 LARKFIELD RD EAST NORTHPORT, NY 11731-2417 COUNTY: SUFFOLK	HWMN	0.964 Mi	SOUTHEAST	2363
007002984	NORTHPORT ANIMAL CLINIC 285 LARKFIELD RD EAST NORTHPORT, NY 11731-2417 COUNTY: SUFFOLK	RCRIS_LG	0.969 Mi	SOUTHEAST	2984
021044292	CAROL GEAR 192 LAUREL RD EAST NORTHPORT, NY 11731-1431 COUNTY: SUFFOLK	SPILLS	0.986 Mi	NORTHEAST	4292
8021059819	MOON STAR GAS STATION 304 LARKFIELD RD EAST NORTHPORT, NY 11731-2902 COUNTY: SUFFOLK	SPILLS	0.995 Mi	SOUTHEAST	9819
8059003456	THOMAS J LEHIGH ELEM SCHO 625 PULASKI RD GREENLAWN, NY 11740-1716 COUNTY: SUFFOLK	LST	0.999 Mi	SOUTHWEST	3456

ERIIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - LARGE QUANTITY GENERATORS - RADIUS SITES)

ERIIS Report #38967 Jan 27, 1994

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
36007004160 NYD068009422	COMPUTER CONVERSIONS CORP	6 DUNTON CT EAST NORTHPORT, NY 11731-1704 COUNTY: SUFFOLK	0 Y LG QTY GEN	0.547 MILES	NORTHEAST	4160
REPORTED WASTE CODES						
36007010177 NYD982738684	AMOCO OIL COMPANY	PULASKI AND LARKFIELD RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	2 Y LG QTY GEN	0.803 MILES	NORTHEAST	177
REPORTED WASTE CODES D000 D001						
36007012532 NYD986931269	AMOCO SERVICE STATION	246 PULASKI RD & LARKFIELD RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	2 Y LG QTY GEN	0.803 MILES	NORTHEAST	2532
REPORTED WASTE CODES F001 F002						
36007002258 NYD010005965	SHERA CLEANERS	32 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.808 MILES	NORTHEAST	2258
REPORTED WASTE CODES F002						
36007011470 NYD986892867	PROVENZANO SERVICE CENTER	30 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.809 MILES	NORTHEAST	1470
REPORTED WASTE CODES D001						
36007000465 NYD000702068	SUNOCO SERVICE STATION	310 LARFIELD & FIFTH AVE E NORTHPORT, NY 11731 COUNTY: SUFFOLK	2 Y LG QTY GEN	0.885 MILES	SOUTHEAST	465
REPORTED WASTE CODES D000 D001						
36007010361 NYD982743577	SUNOCO SERVICE STATION	310 LARKFIELD RD & 5TH AVE EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.885 MILES	SOUTHEAST	361
REPORTED WASTE CODES D001						
36007012758 NYD986941235	SHELL OIL CO	245 LARKFIELD RD EAST NORTHPORT, NY 11731-1829 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.914 MILES	SOUTHEAST	2758

ERIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - LARGE QUANTITY GENERATORS - RADIUS SITES)

Jan 27, 1994

ERIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
REPORTED WASTE CODES D008						
6007011877 NYD986903268	LAUREL SERVICE CENTER	69 LAUREL RD EAST NORTHPORT, NY 11731-1433 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.930 MILES	NORTHEAST	1877
REPORTED WASTE CODES D001						
6007013033 NYD986951093	LOUDON LTD DBA MM PRESS	281 LARKFIELD RD EAST NORTHPORT, NY 11731-2417 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.964 MILES	SOUTHEAST	3033
REPORTED WASTE CODES D000						
1007002984 NYD033920588	NORTHPORT ANIMAL CLINIC	285 LARKFIELD RD EAST NORTHPORT, NY 11731-2417 COUNTY: SUFFOLK	1 Y LG QTY GEN	0.969 MILES	SOUTHEAST	2984
REPORTED WASTE CODES D000						

ERIIS Report #38967

ERIIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - SMALL QUANTITY GENERATORS - RADIUS SITES)

Jan 27, 1994

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
36008008378 NYD986958510	MOBIL OIL CORP SS #LW6	200 ELWOOD RD EAST NORTHPORT, NY 11731-2209 COUNTY: SUFFOLK	3 Y SM QTY GEN	0.238 MILES	NORTHEAST	8378
REPORTED WASTE CODES D000 D001 D008						
36008000989 NYD021133475	STEIN MICHAEL A DDS	761 PULASKI RD GREENLAWN, NY 11740-1710 COUNTY: SUFFOLK	1 Y SM QTY GEN	0.514 MILES	SOUTHWEST	989
REPORTED WASTE CODES D000						
36008002534 NYD117111708	DE PASQUALE FRANCIS L DDS	110 PULASKI RD EAST NORTHPORT, NY 11731-2420 COUNTY: SUFFOLK	1 Y SM QTY GEN	0.728 MILES	NORTHEAST	2534
REPORTED WASTE CODES D000						
36008007778 NYD986946465	EAST NORTHPORT HIGHWAY DEPT	509 2ND ST EAST NORTHPORT, NY 11731-2406 COUNTY: SUFFOLK	2 Y SM QTY GEN	0.790 MILES	SOUTHEAST	7778
REPORTED WASTE CODES D001 D018						
36008004304 NYD982184566	BRIGHTSIDE AUTO BODY INC.	12 BRIGHTSIDE AVE EAST NORTHPORT, NY 11731-1904 COUNTY: SUFFOLK	0 Y SM QTY GEN	0.849 MILES	NORTHEAST	4304
REPORTED WASTE CODES						
36008006063 NYD986884575	LEE DAE W DDS	184 LARKFIELD RD EAST NORTHPORT, NY 11731-1830 COUNTY: SUFFOLK	2 Y SM QTY GEN	0.850 MILES	SOUTHEAST	6063
REPORTED WASTE CODES D000 D011						
36008008379 NYD986958528	MOBIL OIL CORP SS #MGN	236 LARKFIELD RD EAST NORTHPORT, NY 11731-1830 COUNTY: SUFFOLK	3 Y SM QTY GEN	0.903 MILES	SOUTHEAST	8379
REPORTED WASTE CODES D000 D001 D008						

ERIIS ENVIRONM...AL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - SMALL QUANTITY GENERATORS - RADIUS SITES)

IIIS Report #38967

Jan 27, 1994

IIIS ID A ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
008002536 D117111773	DAVIS SAMUEL P DDS	1023 PULASKI RD EAST NORTHPORT, NY 11731-1931 COUNTY: SUFFOLK	1 Y SM QTY GEN	0.958 MILES	NORTHEAST	2536

REPORTED WASTE CODES
D000

ERIIS ENVIRONMENTAL DATA REPORT
FACILITY INDEX SYSTEM
(FINDS - RADIUS SITES)

ERIIS Report #38967

Jan 27, 1994

ERIIS ID EPA ID	FACILITY	FACILITY ADDRESS	SIC CODES	UPDATE	PROGRAM CODES/ REPORT IDS
36003031416 NYD986958510	MOBIL OIL CORP SS #LW6 DISTANCE FROM SITE: 0.238 MILES DIRECTION FROM SITE: NORTHEAST	200 ELWOOD RD EAST NORTHPORT, NY 11731-2209		10/05/92	01 NYD986958510

PROGRAM CODES: 01 - RCRIS 02 - PCS 03 - AIRS 04 - FATES 05 - CERCLIS 06 - FTTS/NCDB 07 - DOCKET 08 - CONTR LIST 09 - CRIMDOCK
11 - FFIS 13 - CICS 14 - STATE 15 - PADS 16 - RCRA-J 17 - TRIS 18 - CUS

ERIIS Report #38967

ERIIS ENVIRONMENTAL DATA REPORT
NEW YORK LEAKING STORAGE TANKS
(LST - RADIUS SITES)

Jan 27, 1994

ERIIS ID SPILL NO. TANK NAME	TANK LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE	MAP ID
6059008442 211943 AUMAN & SON BUS ISTANCE FROM SITE: 0.548 MILES IRECTION FROM SITE: NORTHEAST	24 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 SUFFOLK COUNTY	01/19/1993 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM DIESEL 15.00 GAL	N	/ /	8442
PILL HISTORY:						
6059016476 004176 ECH AIR ISTANCE FROM SITE: 0.572 MILES IRECTION FROM SITE: NORTHEAST	10 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 SUFFOLK COUNTY	01/16/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	HAZARDOUS MATERIAL BROMOCHLOROMETHANE 0.00 GAL	N	07/18/1990	6476
PILL HISTORY:						
3059005321 109722 OLBER RESIDENCE ISTANCE FROM SITE: 0.575 MILES IRECTION FROM SITE: NORTHWEST	45 OLEANDER DR NORTHPORT, NY 11768-3465 SUFFOLK COUNTY	12/11/1991 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	12/12/1991	5321
PILL HISTORY:						
3059003797 010876 OWN OF HUNTINGTON ISTANCE FROM SITE: 0.790 MILES IRECTION FROM SITE: SOUTHEAST	509 2ND ST EAST NORTHPORT, NY 11731-2406 SUFFOLK COUNTY	01/10/1991 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /	3797
PILL HISTORY:						
3059016665 013276 ATTYUNES RESIDENCE STANCE FROM SITE: 0.860 MILES RECTION FROM SITE: SOUTHEAST	414 2ND AVE EAST NORTHPORT, NY 11731-3401 SUFFOLK COUNTY	03/29/1991 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 200.00 GAL	N	04/11/1991	6665
ILL HISTORY:						
059009582 10446 . ANTHONY OF PADUA CHUR STANCE FROM SITE: 0.947 MILES RECTION FROM SITE: SOUTHEAST	20 CHESHIRE PL EAST NORTHPORT, NY 11731-2503 SUFFOLK COUNTY	03/14/1988 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	04/27/1988	9582
ILL HISTORY:						
059009583 10439 ANTHONY'S OF PADUA R.C STANCE FROM SITE: 0.947 MILES RECTION FROM SITE: SOUTHEAST	20 CHESHIRE PL EAST NORTHPORT, NY 11731-2503 SUFFOLK COUNTY	03/14/1988 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	04/27/1988	9583
ILL HISTORY:						

ERIIS ID SPILL NO. TANK NAME	TANK LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE	MAP ID
36059003456 9104458 THOMAS J LEHIGH ELEM SCHO DISTANCE FROM SITE: 0.999 MILES DIRECTION FROM SITE: SOUTHWEST	625 PULASKI RD GREENLAWN, NY 11740-1716 SUFFOLK COUNTY	07/25/1991 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	01/10/1992	3456

SPILL HISTORY:

ERIS ENVIRONMENTAL DATA REPORT
NEW YORK HAZARDOUS WASTE MANIFEST
(HWMN - RADIUS SITES)

IIIS Report #38967

Jan 27, 1994

IIIS ID / CILITY ID	FACILITY	FACILITY ADDRESS	OWNER CONTACT	MAP ID
058009311 / D068009422	COMPUTER COVERSIONS CORP. DISTANCE FROM SITE: 0.547 MILES DIRECTION FROM SITE: NORTHEAST	6 DUNTON CT EAST NORTHPORT, NY 11731-1704 COUNTY: SUFFOLK		9311
058019455 / D986937787	BAUMANN BUS CORPORATION DISTANCE FROM SITE: 0.548 MILES DIRECTION FROM SITE: NORTHEAST	24 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 COUNTY: SUFFOLK		9455
058020472 / D986931269	AMOCO OIL COMPANY DISTANCE FROM SITE: 0.644 MILES DIRECTION FROM SITE: NORTHEAST	246 PULASKI RD EAST NORTHPORT, NY 11731-2441 COUNTY: SUFFOLK	PAUL V CHRISTINA	472
058019888 / D986946465	EAST NORTHPORT HIGHWAY DEPARTMENT DISTANCE FROM SITE: 0.790 MILES DIRECTION FROM SITE: SOUTHEAST	509 2ND ST EAST NORTHPORT, NY 11731-2406 COUNTY: SUFFOLK	LUIS AMADEO	9888
058013969 / D010005965	SHERA CLEANERS DISTANCE FROM SITE: 0.808 MILES DIRECTION FROM SITE: NORTHEAST	32 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK	FORMERLY:DEBONAIR CLEANERS	3969
058018615 / D986892867	PROVENSANO SERVICE CENTER DISTANCE FROM SITE: 0.809 MILES DIRECTION FROM SITE: NORTHEAST	30 LARKFIELD RD EAST NORTHPORT, NY 11731-1849 COUNTY: SUFFOLK		8615
058003055 / D982184566	BRIGHTSIDE AUTO BODY INC DISTANCE FROM SITE: 0.849 MILES DIRECTION FROM SITE: NORTHEAST	12 BRIGHTSIDE AVE EAST NORTHPORT, NY 11731-1904 COUNTY: NASSAU		3055
058013964 / D981132327	CADILLAC CLEANERS DISTANCE FROM SITE: 0.854 MILES DIRECTION FROM SITE: NORTHEAST	15 HEWITT SQ EAST NORTHPORT, NY 11731-2519 COUNTY: SUFFOLK		3964
058022639 / D986941235	SHELL OIL COMPANY DISTANCE FROM SITE: 0.914 MILES DIRECTION FROM SITE: SOUTHEAST	245 LARKFIELD RD EAST NORTHPORT, NY 11731-1829 COUNTY: SUFFOLK	BROOKS	2639
058018277 / D986903268	LAUREL SERVICE CENTER DISTANCE FROM SITE: 0.930 MILES DIRECTION FROM SITE: NORTHEAST	69 LAUREL RD EAST NORTHPORT, NY 11731-1433 COUNTY: SUFFOLK	JOHN CETTA	8277
058001865 / N000001A078	ROBERT M KUBECKA INC. DISTANCE FROM SITE: 0.947 MILES DIRECTION FROM SITE: NORTHEAST	41 BRIGHTSIDE AVE EAST NORTHPORT, NY 11731-1903 COUNTY: SUFFOLK	ROBERT KUBECKA	1865
058022363 / D986951093	MINUTE MAN PRESS D/B/A DISTANCE FROM SITE: 0.964 MILES DIRECTION FROM SITE: SOUTHEAST	281 LARKFIELD RD EAST NORTHPORT, NY 11731-2417 COUNTY: SUFFOLK	LOUDON LTD DAVID S LOUDON JR	2363

ERIIS ENVIRONMENTAL DATA REPORT
NEW YORK SPILLS LIST
(SPILLS - RADIUS SITES)

ERIIS Report #38967

Jan 27, 1994

ERIIS ID SPILL NO. SPILL NAME	SPILL LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE	MAP I
36021066729 9214494 CHARLES BONGIORNO RESIDEN DISTANCE FROM SITE: 0.092 MILES DIRECTION FROM SITE: NORTHEAST	240 ELWOOD RD EAST NORTHPORT, NY 11731-2213 COUNTY:SUFFOLK	03/31/1993 SELF SPILLER ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	/ /	6725
SPILL HISTORY:						
36021015227 9113000 RESIDENCE DISTANCE FROM SITE: 0.193 MILES DIRECTION FROM SITE: SOUTHWEST	22 CHERRY ST EAST NORTHPORT, NY 11731-2207 COUNTY:SUFFOLK	03/24/1992 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	03/25/1992	5227
SPILL HISTORY:						
36021029341 8602352 UNK. DISTANCE FROM SITE: 0.457 MILES DIRECTION FROM SITE: SOUTHWEST	777 PULASKI RD GREENLAWN, NY 11740-1710 COUNTY:SUFFOLK	07/09/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 50.00 GAL	N	07/09/1986	9341
SPILL HISTORY:						
36021043293 8808048 DELAVIS SOD FARM DISTANCE FROM SITE: 0.498 MILES DIRECTION FROM SITE: NORTHEAST	440 PULASKI RD EAST NORTHPORT, NY 11731-2136 COUNTY:SUFFOLK	01/06/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN AIR	UNKNOWN SMOKE ODOR 0.00 GAL	N	01/09/1989	3293
SPILL HISTORY:						
36021020492 9204590 LILCO DISTANCE FROM SITE: 0.547 MILES DIRECTION FROM SITE: NORTHEAST	6 DUNTON CT EAST NORTHPORT, NY 11731-1704 COUNTY:SUFFOLK	07/21/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 1.00 GAL	N	07/22/1992	492
SPILL HISTORY:						
36021059448 9010745 BAUMAN BUS DISTANCE FROM SITE: 0.548 MILES DIRECTION FROM SITE: NORTHEAST	24 RAILROAD AVE EAST NORTHPORT, NY 11731-1736 COUNTY:SUFFOLK	01/08/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	01/09/1991	9448
SPILL HISTORY:						
36021008591 9106606 GRAUSE RESIDENCE DISTANCE FROM SITE: 0.559 MILES DIRECTION FROM SITE: NORTHWEST	33 OLEANDER DR NORTHPORT, NY 11768-3465 COUNTY:SUFFOLK	09/18/1991 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 5.00 GAL	N	09/19/1991	8591
SPILL HISTORY:						

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36021030335 8708758 HUFCO DISTANCE FROM SITE: 0.663 MILES DIRECTION FROM SITE: SOUTHEAST	309 7TH ST EAST NORTHPORT, NY 11731-2824 COUNTY:SUFFOLK	01/13/1988 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	01/21/1988	335
SPILL HISTORY:						
36021008010 9103002 UNK DISTANCE FROM SITE: 0.739 MILES DIRECTION FROM SITE: NORTHEAST	68 CATHERINE ST EAST NORTHPORT, NY 11731-1321 COUNTY:SUFFOLK	06/15/1991 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 25.00 GAL	N	06/17/1991	8010
SPILL HISTORY:						
36021059580 9011663 EAST NORTHPORT F.D DISTANCE FROM SITE: 0.796 MILES DIRECTION FROM SITE: NORTHEAST	1 9TH AVE EAST NORTHPORT, NY 11731-1822 COUNTY:SUFFOLK	02/06/1991 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	02/07/1991	9580
SPILL HISTORY:						
36021023222 9207934 UNK DISTANCE FROM SITE: 0.803 MILES DIRECTION FROM SITE: NORTHEAST	LARKFIELD RD & PULASKI RD EAST NORTHPORT, NY 11731 COUNTY:SUFFOLK	10/08/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 20.00 GAL	N	10/14/1992	3222
SPILL HISTORY:						
36021007548 9102674 BRIGHTSIDE B.P DISTANCE FROM SITE: 0.808 MILES DIRECTION FROM SITE: NORTHEAST	LARKFIELD RD & BRIGHTSIDE EAST NORTHPORT, NY 11731 COUNTY:SUFFOLK	06/06/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /	7548
SPILL HISTORY:						
36021008960 9108567 UNK DISTANCE FROM SITE: 0.808 MILES DIRECTION FROM SITE: NORTHEAST	LARKFIELD RD & BRIGHTSIDE EAST NORTHPORT, NY 11731 COUNTY:SUFFOLK	11/11/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM DIESEL 20.00 GAL	N	11/12/1991	8960
SPILL HISTORY:						
36021013114 9110222 CHRIS DEE RESIDENCE DISTANCE FROM SITE: 0.878 MILES DIRECTION FROM SITE: SOUTHEAST	407 2ND AVE EAST NORTHPORT, NY 11731-3403 COUNTY:SUFFOLK	12/29/1991 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 5.00 GAL	N	/ /	3114
SPILL HISTORY:						

ERIIS ENVIRONMENTAL DATA REPORT
NEW YORK SPILLS LIST
(SPILLS - RADIUS SITES)

Jan 27, 199

ERIIS ID SPILL NO. SPILL NAME	SPILL LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE	MAP
36021044884 8909575 NORTHCO GAS STATION DISTANCE FROM SITE: 0.885 MILES DIRECTION FROM SITE: SOUTHEAST	LARKFIELD RD & 5TH AVENUE EAST NORTHPORT, NY 11731 COUNTY:SUFFOLK	01/04/1990 GAS STATION ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	01/05/1990	48
SPILL HISTORY:						
36021008433 9105712 MR. WALTERS/RELIANCE UTIL DISTANCE FROM SITE: 0.902 MILES DIRECTION FROM SITE: SOUTHEAST	10 CORRAL LN EAST NORTHPORT, NY 11731-3412 COUNTY:SUFFOLK	08/26/1991 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	07/27/1992	843
SPILL HISTORY:						
36021044757 8908812 LILCO DISTANCE FROM SITE: 0.930 MILES DIRECTION FROM SITE: NORTHEAST	CREST DR & VERNON VALLEY EAST NORTHPORT, NY 11731 COUNTY:SUFFOLK	12/06/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 1.00 GAL	N	12/07/1989	475
SPILL HISTORY:						
36021044292 8905454 CAROL GEAR DISTANCE FROM SITE: 0.986 MILES DIRECTION FROM SITE: NORTHEAST	192 LAUREL RD EAST NORTHPORT, NY 11731-1431 COUNTY:SUFFOLK	09/02/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	HAZARDOUS MATERIAL SOLAR NAIL LIQUID 1.00 GAL	N	09/06/1989	429
SPILL HISTORY:						
36021059819 9013095 MOON STAR GAS STATION DISTANCE FROM SITE: 0.995 MILES DIRECTION FROM SITE: SOUTHEAST	304 LARKFIELD RD EAST NORTHPORT, NY 11731-2902 COUNTY:SUFFOLK	03/25/1991 GAS STATION ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	05/10/1991	981
SPILL HISTORY:						

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
REPORTED WASTE CODES D000 D011			
36007010488 NYD982792376	BAB RADIOLOGICAL PC	152 E MAIN ST HUNTINGTON, NY 11743-2958 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D011			
36007005485 NYD117114173	GERALD D. LORIN DMD	158 E MAIN ST HUNTINGTON, NY 11743-2988 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D000			
36007004549 NYD077516979	PAMPER CLEANERS	410 W MAIN ST HUNTINGTON, NY 11743-3246 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES F002			
36007010536 NYD982793119	HUNTINGTON COMPREHENSIVE FOOT	346 NEW YORK AVE HUNTINGTON, NY 11743-3343 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D002			
36007011309 NYD986887768	BURNSTEIN IRWIN DDS	827 PARK AVE HUNTINGTON, NY 11743-4537 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D002			
36007010517 NYD982792921	TEXACO SERVICE STATION - 13-092-0205	1077 PARK AVE HUNTINGTON, NY 11743-5429 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D001 F001			
36007004059 NYD065933442	SPORTIQUE MOTORS	1249 E JERICHO TPKE HUNTINGTON, NY 11743-5611 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D008			

ERIIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - LARGE QUANTITY GENERATORS)

ERIIS ID / EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES / RCRA COMPLIANT (Y/N) / FACILITY ACTIVITIES
36007009382 NYD982270142	JERKINS TRUCK & EQUIPMENT INC	1231 E JERICHO TPKE HUNTINGTON, NY 11743-5611 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES: D000, D001			
36007012906 NYD986945822	L FRENCH CLEANERS	400 W JERICHO TPKE HUNTINGTON, NY 11743-6059 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES: F002			
36007003529 NYD052787934	JIFFY CLEANERS	587 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES: F002			
36007005469 NYD114351323	WEST HILLS ANIMAL HOSPITAL	601 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES: D000			
36007009393 NYD982270373	WE CARE ONE HOUR PHOTO	373 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES: D000			
36007010557 NYD982793754	STATLER RICHARD DC	577 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES: D000, D002			
36007010781 NYD986871358	LASER-SHARP GRAPHICS, INC.	603 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES: D000			
36007013273 NYD986961183	POPULAR 30 MINUTE PHOTO & VIDEO	281 MAIN ST HUNTINGTON, NY 11743-6929 COUNTY: SUFFOLK	2 Y LG QTY GEN

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
REPORTED WASTE CODES D000 D011			
36007010395 NYD982789794	M C M PRINTING & GRAPHICS INC	201 E MAIN ST HUNTINGTON, NY 11743-7903 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D002			
36007000663 NYD000706051	LILCO/NORTHPORT POWER STATION	EATONS NECK RD. NORTHPORT, NY 11768 COUNTY: SUFFOLK	4 Y LG QTY GEN
REPORTED WASTE CODES D000 D001 D002 F001			
36007003253 NYD045254026	LONG ISLAND OYSTER FARMS INC	EATONS NECK ROAD NORTHPORT, NY 11768 COUNTY: SUFFOLK	0 Y LG QTY GEN
REPORTED WASTE CODES			
36007008530 NYD981492499	WOODBINE SERVICE	RTE. 25A & WOODBINE AVENUE NORTHPORT, NY 11768 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D008			
36007009341 NYD982189052	PICTURE THIS	814 B FORT SALONGA ROAD NORTHPORT, NY 11768 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D000			
36007009796 NYD982534927	BAY CLEANERS	826 A FT SALONGA RD NORTHPORT, NY 11768 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES F002			
36007010533 NYD982793085	TEXACO SERVICE STATION - 13-092-0092	RTE 25A & RESERVOIR AVE NORTHPORT, NY 11768 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D001			

ERIIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - LARGE QUANTITY GENERATORS)

ERIIS ID / EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES / RCRA COMPLIANT (Y/N) / FACILITY ACTIVITIES
REPORTED WASTE CODES F001			
36007010684 NYD986867521	TYPE II	19 HARBOR VIEW DRIVE NORTHPORT, NY 11768 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D000			
36007011545 NYD986894509	MIDDLEVILLE RD MIDDLE SCHOOL	MIDDLEVILLE RD NORTHPORT, NY 11768 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D001			
36007012360 NYD986914190	NORTHPORT MIDDLE SCHOOL	LAUREL AVE NORTHPORT, NY 11768 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D000			
36007015292 NY6360010312	VETERANS ADMINISTRATION MEDICAL CENTER	MIDDLEVILLE ROAD NORTHPORT, NY 11768 COUNTY: SUFFOLK	12 Y LG QTY GEN
REPORTED WASTE CODES D004 D006 D007 F002 U035 U036 U151 U206 U237 U239 X001 X002			
36007004196 NYD068073071	NORTHPORT YACHT CLUB	BLUFF POINT RD NORTHPORT, NY 11768-1516 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D001			
36007000568 NYD000703728	SERVICE STATION	1011 FORT SALONGA RD NORTHPORT, NY 11768-2257 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000			

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
REPORTED WASTE CODES D001			
36007004957 NYD093304939	COLONIAL CLEANERS	10-6 FORT SALONGA RD NORTHPORT, NY 11768-2513 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES F002			
36007002886 NYD021139977	CHIC CLEANERS	444 FORT SALONGA RD NORTHPORT, NY 11768-3047 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES F002			
36007008516 NYD981492010	NORTHPORT SHELL	540 ROUTE 25A NORTHPORT, NY 11768-3068 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D008			
36007008507 NYD981491871	GOOD YEAR	670 FORT SALONGA RD NORTHPORT, NY 11768-3147 COUNTY: SUFFOLK	2 Y LG QTY GEN
REPORTED WASTE CODES D000 D008			
36007011018 NYD986878346	NORTHPORT SENIOR HIGH SCHOOL	110 ELWOOD RD NORTHPORT, NY 11768-3455 COUNTY: SUFFOLK	1 Y LG QTY GEN
REPORTED WASTE CODES D000			

ERIIS E[illegible]JNMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
(RCRIS - SMALL QUANTITY GENERATORS)

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008003115 NYD981077845	CIRCUS CLEANERS	1932B JERICHO TNPK EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			
36008003129 NYD981079536	HUNTINGTON AUTO BODY	20351 JERICHO TURNPIKE ELWOOD, NY 11731 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008003219 NYD981132327	CADILLAC CLEANERS	15 HEWIT SQUARE & LARKFIELD RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			
36008005138 NYD982541203	TURBO CLEANERS	528 B LARKFIELD RD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			
36008008276 NYD986889574	LILCO - GREENLAWN SUBSTATION	LAKE & PULASKI RDS GREENLAWN, NY 11740 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES X002			
36008009746 NYD986996544	LINDSAY CHRISTIE AUTOMOTIVE	83B BROADWAY GREENLAWN, NY 11740 COUNTY: SUFFOLK	5 Y SM QTY GEN
REPORTED WASTE CODES D000 D001 D008 D018 D039			
36008002537 NYD117111823	RONALD J. BORGMAN DDS	50 BROADWAY GREENLAWN, NY 11740-1303 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D000			

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008002715 NYD139268023	F&T HITEK AUTO BODY LTD	85 BROADWAY GREENLAWN, NY 11740-1307 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F003			
36008004889 NYD982536930	BALLOON FRENCH CLEANERS	52 BROADWAY GREENLAWN, NY 11740-1321 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			
36008003550 NYD981484629	GETTY SERVICE STATION	2054 NEW YORK AVE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	3 Y SM QTY GEN
REPORTED WASTE CODES D000 D001 D008			
36008006163 NYD986888055	134 OLD COUNTRY ROAD REALTY	1659 NEW YORK AVE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008006173 NYD986888170	HUNTINGTON TOWN OF OAKWOOD GARAGE	OAKWOOD RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D001			
36008006478 NYD986894525	VANTAGE PETROLEUM	859 WALT WHITMAN RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008008667 NYD986963130	A C A AMOCO #588	231 WALT WHITMAN RD HUNTINGTON, NY 11743 COUNTY: NASSAU	4 Y SM QTY GEN
REPORTED WASTE CODES D000 D001 D002 D018			

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ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008008829 NYD986868170	NORTHVILLE INDUSTRIES CORP	532 WALT WHITMAN RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008004691 NYD982528283	HB EUROPEAN	89 E MAIN ST HUNTINGTON, NY 11743-2815 COUNTY: SUFFOLK	5 Y SM QTY GEN
REPORTED WASTE CODES D001 F001 F002 F003 F005			
36008006088 NYD986884831	COHEN EDWIN L DMD	190 E MAIN ST HUNTINGTON, NY 11743-2920 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D002			
36008005898 NYD982797722	OLEAR BRIAN DDS	205 E MAIN ST HUNTINGTON, NY 11743-2923 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D000			
36008004158 NYD981876576	EMERALD FRENCH DRY CLEANERS	223 E MAIN ST HUNTINGTON, NY 11743-2924 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			
36008008913 NYD986970689	BUDGET COMMERCIAL PRINTING INC	221 E MAIN ST HUNTINGTON, NY 11743-2924 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D011			
36008002538 NYD117114314	JOEL L. GREENBERG DMD PC	158 E MAIN ST HUNTINGTON, NY 11743-2988 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D000			

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008008819 NYD986967859	KAY RANDY DDS	202 E MAIN ST HUNTINGTON, NY 11743-2993 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D011			
36008004026 NYD981871767	D & A FLEET MAINTENANCE SERV. INC.	743 PARK AVE HUNTINGTON, NY 11743-3912 COUNTY: SUFFOLK	4 Y SM QTY GEN
REPORTED WASTE CODES D000 D001 F003 F005			
36008004365 NYD982188856	STONE CONTAINER CORP.	ARNOLD DR HUNTINGTON, NY 11743-3918 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES U210			
36008006090 NYD986884856	KLEIN SYMON DDS	775 PARK AVE STE 135 HUNTINGTON, NY 11743-3976 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D002			
36008001856 NYD075778522	DIX HILLS ANIMAL HOSPITAL	1166 E JERICHO TPKE HUNTINGTON, NY 11743-5435 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D000			
36008006469 NYD986894350	LEWIS CLEANERS EAST	1157 E JERICHO TPKE HUNTINGTON, NY 11743-5436 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			
36008003327 NYD981141906	AT&T COMMUNICATIONS	1444 E JERICHO TPKE HUNTINGTON, NY 11743-5456 COUNTY: SUFFOLK	3 Y SM QTY GEN
REPORTED WASTE CODES F001 U075 U121			

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ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008009012 NYD986973865	J I CASE CO DBA CASE POWER & EQUIP	1667 E JERICHO TPKE HUNTINGTON, NY 11743-5711 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008004909 NYD982537268	MIKAL MOSKELAND	442 W JERICHO TPKE HUNTINGTON, NY 11743-6031 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008000647 NYD012757175	HUNTINGTON BRAKE SVC.	448 W JERICHO TPKE HUNTINGTON, NY 11743-6032 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008009151 NYD986980530	ACE TOWING SERVICE INC	464 W JERICHO TPKE HUNTINGTON, NY 11743-6032 COUNTY: SUFFOLK	3 Y SM QTY GEN
REPORTED WASTE CODES D001 D008 D018			
36008007288 NYD986930279	EXXON SERVICE STATION	472 W JERICHO TPKE HUNTINGTON, NY 11743-6033 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D001 D008			
36008000644 NYD012752556	HAGSTROM BUICK CORP.	305 W JERICHO TPKE HUNTINGTON, NY 11743-6332 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008004468 NYD982274664	SCUFFY'S COLLISION CORP	305 W JERICHO TPKE TOM RICE BK HUNTINGTON, NY 11743-6332 COUNTY: SUFFOLK	3 Y SM QTY GEN
REPORTED WASTE CODES D001 F003 F005			

ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008000645 NYD012764362	BURNS FORD INC.	359 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008007123 NYD986925717	EXXON CO USA	341 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D001			
36008006191 NYD986888394	MARKOWITZ M J DMD	215 E MAIN ST HUNTINGTON, NY 11743-7904 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D002			
36008005987 NYD982797029	SHELL OIL CO - NORTHPORT	RTE 25A & LAUREL RD NORTHPORT, NY 11768 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D008 D008			
36008006382 NYD986892131	SHELL SERVICE STATION	RTE 25A & FRESH POND RD FORT SALONGA, NY 11768 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D000 D008			
36008008391 NYD986958643	MOBIL OIL CORP SS #KAF	RTE 25A & VERNON VALLEY NORTHPORT, NY 11768 COUNTY: SUFFOLK	3 Y SM QTY GEN
REPORTED WASTE CODES D000 D001 D008			
36008011408 NY9690308011	US COAST GUARD STA. EATONS NECK	LIGHTHOUSE RD NORTHPORT, NY 11768-1046 COUNTY: SUFFOLK	2 Y SM QTY GEN
REPORTED WASTE CODES D001 F001			

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ERIIS ID EPA ID	FACILITY	ADDRESS	NO. REPORTED WASTES CODES RCRA COMPLIANT (Y/N) FACILITY ACTIVITIES
36008004293 NYD982184277	BUDGET PRINTING CENTER	54 WATERSIDE AVE NORTHPORT, NY 11768-2145 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES D002			
36008005783 NYD982742702	FORT SALONGA CLEANERS	1019 FORT SALONGA RD NORTHPORT, NY 11768-2270 COUNTY: SUFFOLK	1 Y SM QTY GEN
REPORTED WASTE CODES F002			

ERIIS ID / REPORT NUMBER / SOURCE AGENCY	SPILL CITY, STATE, ZIP CODE / SPILL COUNTY	DISCHARGER NAME / ORGANIZATION / ADDRESS	SPILL DATE / MATERIAL(S) SPILLED / QUANTITY SPILLED	MEDIA AFFECTED: LAND	WATER	AIR	GRND WATER	FACILITY	WATER WAY AFFECTED
36002000032 102877 NATL. RESPONSE CTR	NORTHPORT, NY SUFFOLK	NOT REPORTED NOT REPORTED	01/14/92 OIL, FUEL: NO. 2 2 GAL	N	Y	N	N	N	LONG ISLAND SOUND

LOCATION: OFFSHORE LOADING PLATFORM NORTH PORT POWER PLANT
WOODSIDE AVE
DESCRIPTION: MATERIAL IS COMING FROM UNDER THE TANKER FREJA ISLANDER
ACTION TAKEN: BOOMS ARE DEPLOYED AND CREWS ARE TRYING TO LOCATE THE SOURCE OF THE MATERIAL
MISCELANEOUS: SHEEN SIZE:UNKNOWN
FOR FURTHER INFORMATION CALL:(516)262-2294

36002000537 131280 NATL. RESPONSE CTR	NORTHPORT, NY SUFFOLK	LONG ISLAND LIGHTING CO 175 EAST OLD COUNTRY RD HICKSVILLE, NY 11801	08/11/92 HYDRAULIC OIL	N	Y	N	N	N	LONG ISLAND SOUND

LOCATION: NORTHPORT POWER PLANT EATONS NECK RD
DESCRIPTION: T/V OCEAN SPIRIT/LEAKING ENGINE ROOM DRAIN
ACTION TAKEN: SECURED LEAK, BOOM AND SORBENTS USED TO CONTAIN SPILL
MISCELANEOUS: SHEEN SIZE=30 FT X 150 FT, UNKNOWN COLOR, WILL CALL CTY HEALTH SERVICES AND NYDEC, CONTACT ROGER FRANK AT 516-262-2230

36002000988 147124 NATL. RESPONSE CTR	NORTHPORT, NY SUFFOLK	NOT REPORTED NOT REPORTED	12/01/92 UNKNOWN OIL 1 GAL	N	Y	N	N	N	LONG ISLAND SOUND

LOCATION: WATERSIDE AVENUE
DESCRIPTION: UNKNOWN / UNKNOWN SHEEN SIGHTING SHEEN SIZE: UNKNOWN
ACTION TAKEN: DEPLOYING BOOM AND USING SORBENT PADS TO RECOVER THE MATERIAL
MISCELANEOUS: WILL NTFY DEC, CO HEALTH, AND CO PUBLIC WORKS

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ERIIS ID EPA ID	FACILITY	FACILITY ADDRESS	SIC CODES	UPDATE	PROGRAM CODES/ REPORT IDS
36003001210 NYD000706051	LILCO NORTHPORT POWER STATION	EATONS NECK RD NORTHPORT, NY 11768	4911	04/30/92	01 NYD000706051 03 3610300006 03 361031922 02 NY0103560
36003001935 NYD000910877	VILLAGE OF NORTHPORT STP	224 MAIN & BEACH STREET NORTHPORT, NY 11768	4952	10/05/92	02 NY0024881
36003004502 NYD008993349	AXINN & SONS LUMBER CO INC	ROUTE 25A/LINC AVE NORTHPORT, NY 11768	6552	02/27/91	03 3610300013
36003006791 NYD045254026	LONG ISLAND OYSTER FARMS INC	EATONS NECK ROAD NORTHPORT, NY 11768	0913	10/05/92	01 NYD045254026
36003017949 NYD981492499	WOODBINE SERVICE	RTE 25A & WOODBINE AVE NORTHPORT, NY 11768		10/05/92	01 NYD981492499
36003020280 NYD982189052	PICTURE THIS	814 B FORT SALONGA RD NORTH PORT, NY 11768	7221 7384	10/05/92	01 NYD982189052
36003021299 NYD982534927	BAY CLEANERS	826A FT SALONGA RD NORTHPORT, NY 11768		10/05/92	01 NYD982534927
36003023271 NYD982793085	TEXACO SERVICE STA 13-092-0092	RTE 25A & RESERVOIR AVE NORTHPORT, NY 11768		11/15/91	01 NYD982793085
36003023719 NYD986867521	TYPE II	19 HARBOR VIEW DR NORTHPORT, NY 11768		04/03/90	01 NYD986867521
36003025884 NYD986892131	SHELL SERVICE STATION	RTE 25A & FRESH POND RD FORT SALONGA, NY 11768		04/05/90	01 NYD986892131
36003026070 NYD986894509	MIDDLEVILLE RD MIDDLE SCHOOL	MIDDLEVILLE RD NORTHPORT, NY 11768		10/05/92	01 NYD986894509
36003027770 NYD986914190	NORTHPORT MIDDLE SCHOOL	LAUREL AVE NORTHPORT, NY 11768	8211	10/05/92	01 NYD986914190
36003029138 NYD986935260	AMOCO OIL CO	RTE 25A & LAUREL RD NORTHPORT, NY 11768		02/12/91	01 NYD986935260 01 NYD982797029

PROGRAM CODES: 01 - RCRIS 02 - PCS 03 - AIRS 04 - FATES 05 - CERCLIS 06 - FTTS/NCDB 07 - DOCKET 08 - CONTR LIST 09 - CRIMDOCK
11 - FFIS 13 - CICS 14 - STATE 15 - PADS 16 - RCRA-J 17 - TRIS 18 - CUS

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36003017932 NYD981492010	NORTHPORT SHELL	540 ROUTE 25A NORTHPORT, NY 11768-3068		05/03/91	01 NYD981492010
36003009548 NYD077401206	OHLERT - RUGGIERE INC	700 FORT SALONGA RD NORTHPORT, NY 11768-3147		11/20/92	01 NYD077401206
36003009929 NYD081517567	NORTH AMERICAN TIRE CORP	670 FORT SALONGA RD NORTHPORT, NY 11768-3147		03/30/82	01 NYD081517567
36003017922 NYD981491871	GOOD YEAR	670 FORT SALONGA RD NORTHPORT, NY 11768-3147		03/30/90	01 NYD981491871
36003021027 NYD982529141	CRYSTAL DRIVE IN CLEANERS	700 FORT SALONGA RD NORTHPORT, NY 11768-3147		06/27/90	01 NYD982529141
36003024663 NYD986878346	NORTHPORT SENIOR HIGH SCHOOL	110 ELWOOD RD NORTHPORT, NY 11768-3455		10/05/92	01 NYD986878346 06 I02#19911211R0202 1

PROGRAM CODES: 01 - RCRIS 02 - PCS 03 - AIRS 04 - FATES 05 - CERCLIS 06 - FTTS/NCDB 07 - DOCKET 08 - CONTR LIST 09 - CRIMDOCK
11 - FFIS 13 - CICS 14 - STATE 15 - PADS 16 - RCRA-J 17 - TRIS 18 - CUS

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NUCLEAR SITES
(NUCLEAR)

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ERIIS ID FACILITY	STREET	CITY	STATE	ZIP	COUNTY	REGION	DOCUM NUMBER
38002000001 LONG ISLAND LIGHTING CO. (SHOREHAM)	7.1 MI SSE OF BROOKHAVEN		NY		SUFFOLK	I	050-00

ERIIS ID. / CBS NO. / PBS NO. / SPDES NO.	FACILITY / ADDRESS	FACILITY TYPE	CERT. EXP. STATUS	CONTACT / PHONE
36047000659 / 1-000162	HAZELTINE-BUILDING #13 / CUBA HILL RD. 1750 OLD COUNTRY RD. / GREENLAWN, NY 11740	OTHER	07/11/1989 / 07/11/1991 / INACTIVE	HAZELTINE CORPORATION / (516) 261-7000

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
13001	ABOVEGROUND	CLOSED - REMOVED		5500	0

36047000757 / 1-000260	WELL #11 / PULASKI ROAD / GREENLAWN, NY 11740	MUNICIPALITY	05/05/1993 / 07/27/1995 / ACTIVE	GREENLAWN WATER DISTRICT / (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
11	ABOVEGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	2000	50

36047000716 / 1-000219	PLANT 10-1 & 10-2 / WHITSON RD. / HUNTINGTON, NY 11743	MUNICIPALITY	04/14/1993 / 07/19/1995 / ACTIVE	KEVIN CARROLL / (516) 427-8190

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
01	UNDERGROUND, VAULTED, WITH ACCESS	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	1000	50
02	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	2000	50

36047000719 / 1-000222	PLANT 6 / W. ROGUE PATH & LEDGEWOOD DR. / HUNTINGTON, NY 11743	MUNICIPALITY	04/14/1993 / 07/19/1995 / ACTIVE	KEVIN CARROLL / (516) 427-8190

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
001	UNDERGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	4000	50

36047000755 / 1-000258	WELL #9 / BUTTERCUP LANE / HUNTINGTON, NY 11743	MUNICIPALITY	05/05/1993 / 07/27/1995 / ACTIVE	GREENLAWN WATER DISTRICT / (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
9	ABOVEGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	2000	50

36047000759 / 1-000262	WELL #14 / CUBA HILL ROAD / HUNTINGTON, NY 11743	MUNICIPALITY	05/05/1993 / 07/27/1995 / ACTIVE	GREENLAWN WATER DISTRICT / (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
14	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	2000	50

ERIIS ID. / CBS NO. / PBS NO. / SPDES NO.	FACILITY ADDRESS	FACILITY TYPE	CERT. EXP. STATUS	CONTACT PHONE
36047002019 1-000411 0-070033	SEWER DISTRICT #5-HUNTINGTON (MAIN PLANT) TRUXTON ROAD HUNTINGTON, NY 11743	UTILITY MUNICIPALITY	06/30/1993 07/22/1995 ACTIVE	RAYMOND EIRING (516) 854-1990

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ
001	ABOVEGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	500	9

36047002071 1-000421	DIX HILLS PARK VANDERBUILT PARKWAY DIX HILLS, NY 11743	MUNICIPALITY	10/08/1991 10/08/1993 ACTIVE	JACK FASS (516) 499-8058

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ
6	ABOVEGROUND 10% OR MORE BELOW GROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	1500	1[illegible]

36047002252 1-000441	WELL #13 ELMO PLACE, EAST NORTHPORT HUNTINGTON, NY 11743	UTILITY MUNICIPALITY	05/05/1993 05/05/1995 ACTIVE	GREENLAWN WATER DISTRICT (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ
13	UNDERGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6000	2[illegible]

36047002253 1-000442	WELL #4 CLAY PITTS ROAD, GREENLAWN HUNTINGTON, NY 11743	UTILITY MUNICIPALITY	05/05/1993 05/05/1995 ACTIVE	GREENLAWN WATER DISTRICT (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ
4	UNDERGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6000	25

36047002254 1-000443	WELL #6 JERICHO TURNPIKE, SOUTHSIDE, HUNTINGTON HUNTINGTON, NY 11743	UTILITY MUNICIPALITY	05/05/1993 05/05/1995 ACTIVE	GREENLAWN WATER DISTRICT (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ
6	UNDERGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6000	25

36047002090 1-000422 0-021342	HUNTINGTON SEWAGE TREATMENT PLANT CREEK RD HUNTINGTON, NY 11743-2022	UTILITY MUNICIPALITY	11/19/1991 11/19/1993 ACTIVE	PAUL PASTORE (516) 351-3242

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
2	ABOVEGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	4513	30
3	ABOVEGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6400	15

ERIIS ID. / CBS NO. / PBS NO. / SPDES NO.	FACILITY ADDRESS	FACILITY TYPE	CERT. EXP. STATUS	CONTACT PHONE
36047000756 1-000259	WELL # 10 & 15 MANOR RD HUNTINGTON, NY 11743-4835	MUNICIPALITY	05/05/1993 07/27/1995 ACTIVE	GREENLAWN WATER DISTRICT (516) 261-0874

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
10	UNDERGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6000	25

36047000720 1-000223	PLANT 15 DOWNS RD HUNTINGTON, NY 11743-6342	MUNICIPALITY	04/14/1993 07/19/1995 ACTIVE	KEVIN CARROLL (516) 427-8190

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
01	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	3000	50

36047000635 1-000138 0-005941	NORTHPORT POWER STATION EATONS NECK ROAD NORTHPORT, NY 11768	UTILITY	07/29/1993 07/06/1995 ACTIVE	WATCH ENGINEER (516) 757-1800

TANK NO.	TANK LOCATION	STATUS	SUBSTANCE DESC.	CAPACITY (GAL)	% HAZ.
302211023	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	4019	96
302211024	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	8000	50
302211025	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	5460	96
302311026	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6230	50
302211027	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	6580	96
302211028	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	3377	50
302211052	ABOVEGROUND	IN-SERVICE	SINGLE HAZARDOUS SUBSTANCE ON DEC LIST	28000	100

ERIIS ID MOSF NO. CBS NO.	FACILITY ADDRESS	CONTACT NAME PHONE NO.	FACILITY STATUS FACILITY TYPE	NO. OF TANKS TOTAL CAPACITY (GAL)	LICENSE STATUS ISSUANCE DATE EXPIRATION DATE
36049000449 1-3160	PORT DOCK & STONE CORP NEW YORK AVENUE HALESITE, NY 11743	S ALBICOCCO	NO LONGER A MAJOR FACILITY	0 0	DID NOT APPLY 01/01/19 / /
36049000428 1-2760 1-000138	NORTHPORT POWER STATION WATERSIDE AVENUE NORTHPORT, NY 11768	JAMES K. BRENNEN (516) 262-2200	ACTIVE UTILITY	41 85080725	ISSUED 04/14/19 03/31/19

TANK NO.	TANK LOCATION CODE	STATUS CODE	PRODUCT CODE	CAPACITY (GAL)
				0

TANK NO.	TANK LOCATION	STATUS	PRODUCT	CAPACITY (GAL)
302-201-001	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	13524000
302-201-002	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	13524000
302-201-003	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	13524000
302-201-004	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	13524000
302-201-005	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	27035400
302-201-006	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	630000
302-201-007	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	630000
302-201-008	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	630000
302-201-009	ABOVEGROUND	IN-SERVICE	NOS. 5 OR 6 FUEL OIL	630000
302-201-010	ABOVEGROUND	TEMPORARILY OUT-OF-SERVICE	EMPTY	210000
302-201-011	ABOVEGROUND	TEMPORARILY OUT-OF-SERVICE	EMPTY	210000
302-201-012	ABOVEGROUND	IN-SERVICE	OTHER	210000
302-201-013	ABOVEGROUND	IN-SERVICE	NOS. 1, 2, OR 4 FUEL OIL	420000
302-201-014	ABOVEGROUND	IN-SERVICE	NOS. 1, 2, OR 4 FUEL OIL	42000
302-201-015	ABOVEGROUND	IN-SERVICE	NOS. 1, 2, OR 4 FUEL OIL	42000
302-201-016	ABOVEGROUND	IN-SERVICE	NOS. 1, 2, OR 4 FUEL OIL	42000
302-201-017	ABOVEGROUND	IN-SERVICE	NOS. 1, 2, OR 4 FUEL OIL	42000
302-101-029	UNDERGROUND	CLOSED - REMOVED	UNLEADED GASOLINE	4000
302-101-030	UNDERGROUND	CLOSED - REMOVED	OTHER	2000
302-101-031	UNDERGROUND	CLOSED - REMOVED	OTHER	2000
302-101-032	UNDERGROUND	CLOSED - REMOVED	OTHER	2000
302-101-033	UNDERGROUND	CLOSED - REMOVED	OTHER	550
302-101-034	UNDERGROUND	CLOSED - REMOVED	OTHER	550
302-101-035	UNDERGROUND	IN-SERVICE	DIESEL	1000
302-201-036	ABOVEGROUND	IN-SERVICE	OTHER	275
302-201-037	ABOVEGROUND	IN-SERVICE	OTHER	275
302-201-038	ABOVEGROUND	IN-SERVICE	OTHER	275
302-201-039	ABOVEGROUND	IN-SERVICE	OTHER	275
302-201-040	ABOVEGROUND	IN-SERVICE	OTHER	275
302-201-041	ABOVEGROUND	IN-SERVICE	OTHER	275
302-101-042	UNDERGROUND	CLOSED - REMOVED	NOS. 1, 2, OR 4 FUEL OIL	275
302-201-045	ABOVEGROUND	IN-SERVICE	OTHER	10000
302-201-046	ABOVEGROUND	IN-SERVICE	OTHER	10000
302-201-047	ABOVEGROUND	IN-SERVICE	OTHER	8000
302-201-048	ABOVEGROUND	IN-SERVICE	OTHER	8000
321-101-136	ABOVEGROUND	IN-SERVICE	NOS. 1, 2, OR 4 FUEL OIL	100000
321-101-001	UNDERGROUND	CLOSED - REMOVED	OTHER	550
321-101-002	UNDERGROUND	CLOSED - REMOVED	OTHER	550
302-201-057	ABOVEGROUND	IN-SERVICE	OTHER	6100

ERIIS ID / MOSF NO. / CBS NO.	FACILITY / ADDRESS	CONTACT NAME / PHONE NO.	FACILITY STATUS / FACILITY TYPE	NO. OF TANKS / TOTAL CAPACITY (GAL)	LICENSE STATUS / ISSUANCE DATE / EXPIRATION DATE
302-201-059	ABOVEGROUND	IN-SERVICE	OTHER		6100
302-201-061	ABOVEGROUND	IN-SERVICE	OTHER		275
302-201-056	ABOVEGROUND	IN-SERVICE	OTHER		6100
302-201-058	ABOVEGROUND	IN-SERVICE	OTHER		6100
302-201-018	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	OTHER		10000
302-201-019	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	OTHER		10000
302-201-020	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	OTHER		10000
302-201-021	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	OTHER		10000
302-101-069	UNDERGROUND	IN-SERVICE	UNLEADED GASOLINE		4000
302-201-067	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	OTHER		2000
302-201-068	ABOVEGROUND ON CRIB, RACK, OR CRADLE	IN-SERVICE	OTHER		2000
36049000520	MEENAN OIL, NORTHPORT	R. KUNNMANN	NO LONGER A MAJOR FACILITY	0	DID NOT APPLY
1-2100	400 FORT SALONGA RD NORTHPORT, NY 11768-3046	(516) 783-1000	STORAGE TERMINAL	0	/ / / /

TANK NO.	TANK LOCATION CODE	STATUS CODE	PRODUCT CODE	CAPACITY (GAL)
				0

ERIIS ENVIRONMENTAL DATA REPORT
NEW YORK PETROLEUM BULK STORAGE FACILITIES
(PBS)

ERIIS Report #38967

Jan 27, 1994

ERIIS ID PBS NO. CBS NO.	FACILITY ADDRESS	CONTACT NAME PHONE	SITE STATUS FACILITY TYPE	NO. OF TANKS CAPACITY (GAL)	CERTIFICATE DATE EXPIRATION DATE
36048008323 6-230545	NYSDOT MAIN STREET HUNTINGTON, NY 11743-6903	DONALD GORDINIER (518) 648-5551	ACTIVE	3 8000	04/16/1992 03/24/1997

ERIIS ID SPILL NO. TANK NAME	TANK LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
36059009195 3703721 CENTERPORT CHURCH	LITTLE NECK RD CENTERPORT, NY 11721-1613 SUFFOLK COUNTY	08/05/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	02/24/1988
SPILL HISTORY:					
36059016624 9011084 BAYLIS & BAYLIS	1 E MAIN ST HUNTINGTON, NY 11743-2812 SUFFOLK COUNTY	01/18/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	02/06/1991
SPILL HISTORY:					
36059017930 9301001 WOODHULL SCHOOL	WOODHULL RD HUNTINGTON, NY 11743-3727 SUFFOLK COUNTY	04/20/1993 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	/ /
SPILL HISTORY:					
36059003516 9106305 AT&T	1444 E JERICHO TPKE HUNTINGTON, NY 11743-5456 SUFFOLK COUNTY	09/11/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	11/06/1991
SPILL HISTORY:					
36059005805 9112625 EXXON USA S/S	472 W JERICHO TPKE HUNTINGTON, NY 11743-6033 SUFFOLK COUNTY	03/11/1992 GAS STATION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	03/31/1992
SPILL HISTORY:					
36059008803 8601722 COUNTRY LINCOLN MERCURY	345 W JERICHO TPKE HUNTINGTON, NY 11743-6334 SUFFOLK COUNTY	06/11/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM WASTE OIL 0.00	N	10/03/1986
SPILL HISTORY:					
36059008888 8605059 COUNTRY LINCOLN MERCURY	345 W JERICHO TPKE HUNTINGTON, NY 11743-6334 SUFFOLK COUNTY	11/07/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	05/22/1987
SPILL HISTORY:					
36059003363 9102264 DYNAMIC DETAILING	313 W JERICHO TPKE HUNTINGTON, NY 11743-6360 SUFFOLK COUNTY	05/27/1991 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	08/13/1991
SPILL HISTORY:					
36059008434 9211909 MARSH'S MEN & BOYS WEAR	270 MAIN ST HUNTINGTON, NY 11743-6909 SUFFOLK COUNTY	01/18/1993 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	/ /
SPILL HISTORY:					

ERIIS ENVIRONMENTAL DATA REPORT
NEW YORK LEAKING STORAGE TANKS
(LST)

ERIIS Report #38967 Jan 27, 1994

ERIIS ID SPILL NO. TANK NAME	TANK LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
6059003531 106821 AUMSETT STATE PARK	LLOYD HARBOR RD HUNTINGTON, NY 11743-9701 SUFFOLK COUNTY	09/24/1991 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	01/14/1993
PILL HISTORY:					
6059001026 806814 IDDLEVILLE FIRE DEPT.	MAIN ST NORTHPORT, NY 11768-1722 HERKIMER COUNTY	11/15/1988 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00	N	11/06/1992
PILL HISTORY:					
6059009068 701554 .NORTHPORT JR. SCHOOL	5TH AVE NORTHPORT, NY 11768-2806 SUFFOLK COUNTY	05/26/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/23/1987
PILL HISTORY:					
6059009092 701988 CHOOL DISTRICT	5TH AVE NORTHPORT, NY 11768-2806 SUFFOLK COUNTY	06/09/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/28/1987
PILL HISTORY:					
6059009074 701644 CEAN AVE.ELEMANTARY SCHO	110 ELWOOD RD NORTHPORT, NY 11768-3455 SUFFOLK COUNTY	05/28/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	02/27/1989
PILL HISTORY:					
6059009087 701907 ORTHPORT SENIOR HIGH SCH	110 ELWOOD RD NORTHPORT, NY 11768-3455 SUFFOLK COUNTY	06/05/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/28/1987
PILL HISTORY:					
6059003445 104220 ARBORFIELD CENTRAL S.D	TAYLOR AVENUE GREENLAWN, NY SUFFOLK COUNTY	07/19/1991 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/30/1991
PILL HISTORY:					
6059003458 104526 ARBORFIELD H.S	TAYLOR AVENUE GREENLAWN, NY SUFFOLK COUNTY	07/26/1991 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	01/22/1992
PILL HISTORY:					
6059004166 702803 AZELTINE	CUBA HILL ROAD GREENLAWN, NY SUFFOLK COUNTY	07/08/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	01/07/1992
PILL HISTORY:					

ERIIS ID SPILL NO. TANK NAME	TANK LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
36059004167 8702879 HAZELTINE	CUBA HILL ROAD GREENLAWN, NY SUFFOLK COUNTY	07/10/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	01/07/1992
SPILL HISTORY:					
36059004199 8705925 HAZELTINE	CUBA HILL ROAD BLDG 2 GREENLAWN, NY SUFFOLK COUNTY	10/14/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	01/07/1992
SPILL HISTORY:					
36059005589 9111259 MAXINE JUROUS RESIDENCE	11 HARBORVIEW AVENUE GREENLAWN, NY SUFFOLK COUNTY	01/31/1992 SELF SPILLER GROUNDWATER	PETROLEUM #2 FUEL 200.00 GAL	N	02/25/1992
SPILL HISTORY:					
36059009135 8702617 HAZELTINE BLDG 11	CUBA HILL ROAD GREENLAWN, NY SUFFOLK COUNTY	07/01/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/02/1989
SPILL HISTORY:					
36059013474 8800798 HAZELTINE	CUBA HILL RD GREENLAWN, NY SUFFOLK COUNTY	04/25/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	NON PETRO/NON HAZMAT RINSE OF WATER 6400.00 GAL	N	04/28/1988
SPILL HISTORY:					
36059004106 8604840 NORTHPORT VA HOSPITAL	NORTHPORT VA HOSPITAL NORTHPORT, NY SUFFOLK COUNTY	10/25/1986 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	/ /
SPILL HISTORY:					
36059008806 8601928 MEENAN	RTE 25A NORTHPORT, NY SUFFOLK COUNTY	06/20/1986 BULK OIL FACILITY-DISTRIBUTOR OR WHOLESALE GROUNDWATER	PETROLEUM #2 FUEL 0.00	N	07/28/1986
SPILL HISTORY:					
36059008917 8606333 GOODYEAR TIRE	GOODYEAR TIRE NORTHPORT, NY SUFFOLK COUNTY	01/12/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	04/20/1987
SPILL HISTORY:					
36059009070 8701607 NORTHPORT JR.HIGH SCHOOL	LAUREL AVENUE NORTHPORT, NY SUFFOLK COUNTY	05/27/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	11/16/1987
SPILL HISTORY:					

EHIIL ENVIRONMENTAL DATA REPORT
NEW YORK LEAKING STORAGE TANKS
(LST)

IIIS Report #38967 — Jan 27, 1994

IIIS ID 'ILL NO. ANK NAME	TANK LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
059009076 01669 EAN AVE ELEM SCHOOL	DOGWOOD DRIVE NORTHPORT, NY SUFFOLK COUNTY	05/29/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/23/1987
'ILL HISTORY:					
059009081 01783 DDLEVILLE ELEM.SCHOOL	MIDDLEVILLE ROAD NORTHPORT, NY SUFFOLK COUNTY	06/02/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	10/14/1987
'ILL HISTORY:					
059009084 01813 CKINSON ELEM SCHOOL	DICKINSON ROAD NORTHPORT, NY SUFFOLK COUNTY	06/03/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/28/1987
'ILL HISTORY:					
059009086 01870 LASKI ELEM	PULASKI ROAD NORTHPORT, NY SUFFOLK COUNTY	06/04/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	09/09/1987
'ILL HISTORY:					
059009090 01969 RTHPORT SCHOOL	BELLROSE ELEM SCHOOL NORTHPORT, NY SUFFOLK COUNTY	06/08/1987 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	12/23/1987
'ILL HISTORY:					
059013571 04107 RTHPORT MARINE CENTER	ROUTE 25A NORTHPORT, NY SUFFOLK COUNTY	08/10/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	09/15/1988
'ILL HISTORY:					
059013886 07834 ST NORTHPORT LANDFILL	TOWN LINE ROAD NORTHPORT, NY SUFFOLK COUNTY	11/07/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	02/04/1991
'ILL HISTORY:					
059017686 14233 JLF S/S	WATERSIDE AVENUE NORTHPORT, NY SUFFOLK COUNTY	03/26/1993 GAS STATION ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	/ /
'ILL HISTORY:					

ERIIS ID FACILITY ID FACILITY	OPERATOR NAME FACILITY ADDRESS PHONE NO.	PERMIT NO. ISSUE DATE EXPIRATION DATE	REGULATORY STATUS	FACILITY ACTIVITY WASTE TYPE
6018000030 2C19 .I. COMPOST (METSKI)	EDWARD METSKI NY COUNTY: SUFFOLK	1472600490000020 / / 03/29/19	None	COMPOSTING Yard Waste, Manure
6018000032 2D09 TECK & PHILBIN DEVEL.	 NY COUNTY: SUFFOLK	0 02/19/19 12/31/19	NONE	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL DEMOLITION
6018000034 2D12 10 SAND & GRAVEL CFDS	110 SAND COMPANY NY COUNTY: SUFFOLK	10840271 10/01/19 09/30/19	Permit	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL Demolition
6018000037 2D17 . SCHLEIDER C & D SITE	 NY COUNTY: SUFFOLK	0 / / / /	NONE	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL DEMOLITION
6018000041 2D46 LYDENBURGH CF (ISLIP)	 NY COUNTY: SUFFOLK	1472800628000030 12/17/19 01/16/19	Permit	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL Cleanfill
6018000042 2F04 MITHTOWN LANDGAS CO.	 NY COUNTY: SUFFOLK	3175 10/28/19 11/01/19	NONE	LANDFILL GAS RECOVERY RESIDENTIAL, COMMERCIAL
6018000043 2F05 OLTSVILLE LF ENERGY CO.	 NY COUNTY: SUFFOLK	0 / / / /	NONE	LANDFILL GAS RECOVERY RESIDENTIAL
6018000044 2F06 'EHRAN (YAPHANK LF)	 NY COUNTY: SUFFOLK	1472200799000010 07/15/19 07/31/19	Permit	LANDFILL GAS RECOVERY Residential
3018000049 2F13 VERGY TACTICS SMITHTOWN	 NY COUNTY: SUFFOLK	1282000951 10/05/19 10/05/19	Permit	LANDFILL GAS RECOVERY
3018000050 2F14 ERNERAL ENERGY DEVELOP	INTE-FAC CORP. NY COUNTY: SUFFOLK	1472800702000010 04/04/19 04/30/19	Permit	LANDFILL GAS RECOVERY Gas
3018000056 2S13 ORTH SEA SLF	GEORGE STAVROPOULOS NY COUNTY: SUFFOLK	1473600324000020 12/18/19 12/18/19	Permit	MIXED SOLID WASTE LANDFILL Residential, Commercial

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NEW YORK SOLID WASTE FACILITIES
(SWF)

:RIIS Report #38967

Jan 27, 1994

:RIIS ID 'ACILITY ID 'ACILITY	OPERATOR NAME FACILITY ADDRESS PHONE NO.	PERMIT NO. ISSUE DATE EXPIRATION DATE	REGULATORY STATUS	FACILITY ACTIVITY WASTE TYPE
6018000062 2T04 & G CARTING T.S.	NY COUNTY: SUFFOLK	0 / / / /	NONE	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) RESIDENTIAL
6018000064 2T07 ET PAPER STOCK CORP.	NY COUNTY: SUFFOLK	1472800720 03/04/19 03/04/19	PERMIT	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) RESIDENTIAL
6018000065 2T10 APID DEMO	NY COUNTY: SUFFOLK	10870730 07/10/19 07/09/19	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
6018000066 2T27 ICKEY CARTING TS	NY COUNTY: SUFFOLK	0 / / / /	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
6018000067 2T32 ARAFOLA CARTING TS	NY COUNTY: SUFFOLK	0 / / / /	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
6018000068 2T33 ABRINA	NY COUNTY: SUFFOLK	0 / / / /	CLOSURE ORDER	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) RESIDENTIAL
6018000069 2T42 IONTAUK T.S.	NY COUNTY: SUFFOLK	1472400035000010 12/12/19 12/11/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
6018000070 2T46 NIQUE SANITATION	NY COUNTY: SUFFOLK	0 / / / /	Upgrade Order	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Commercial
6018000071 2T77 AST HAMPTON S.T.O.P.	NY COUNTY: SUFFOLK	10891339 12/12/19 12/12/19	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
6018000072 2T83 ELAS ENTERPRISES	NY COUNTY: SUFFOLK	1472200699 07/10/19 07/10/19	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
6018000075 2Y12 NELAWN CEMETRY	NY COUNTY: SUFFOLK	0 / / / /	None	YARD WASTE COMPOSTING Yard Waste

RIIS ID ACILITY ID ACILITY	OPERATOR NAME FACILITY ADDRESS PHONE NO.	PERMIT NO. ISSUE DATE EXPIRATION DATE	REGULATORY STATUS	FACILITY ACTIVITY WASTE TYPE
301800007 6 2Y18 OWN OF ISLIP	ELIZABETH GALLAGHER NY COUNTY: SUFFOLK	1472809691000010 03/31/19 03/31/19	Permit	YARD WASTE COMPOSTING Yard Waste
301800007 8 2Y21 OOKHAVEN YARD WASTE	JAMES HEIL, COMM. OF DSW NY COUNTY: SUFFOLK	10882012 04/18/19 04/18/19	None	YARD WASTE COMPOSTING Yard Waste
301800008 1 2Y25 ODUCTIVE RECYCLING	 NY COUNTY: SUFFOLK	0 / / / /	None	YARD WASTE COMPOSTING Yard Waste
301800085 4 2D43 HOLE GOLF COURSE	 NY COUNTY: SUFFOLK	1472200571000010 07/31/19 07/31/19	Permit	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL
301800085 5 2D48 . CHARLES CEMETARY	 NY COUNTY: SUFFOLK	1472000652000010 11/05/19 11/30/19	Permit	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL
301800085 6 2D52 ITHTOWN CLEANFILL	 NY COUNTY: SUFFOLK	10880829 11/01/19 10/31/19	Permit	CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL
301800085 7 2T08 YSIDE CARTING (BAYSIDE)	 NY COUNTY: SUFFOLK	0 / / / /	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
01800085 8 T09 M LIQUID WASTE REMOVAL	 NY COUNTY: SUFFOLK	1472000317000010 06/01/19 05/31/19	SAPA	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
01800085 9 T12 S CARTING (BROOKHAVEN)	 NY COUNTY: SUFFOLK	0 / / / /	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
01800086 0 T30 UTHOLD STOP	 NY COUNTY: SUFFOLK	10871069 06/14/19 06/13/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
01800086 1 T35 MPTON BAYS T.S.	BRIAN GILBRIDE NY COUNTY: SUFFOLK	10890031 01/15/19 12/31/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Mixed Municipal

ERIIS ENVIRONMENTAL DATA REPORT
NEW YORK SOLID WASTE FACILITIES
(SWF)

RIIS Report #38967 Jan 27, 1994

RIIS ID ACILITY ID ACILITY	OPERATOR NAME FACILITY ADDRESS PHONE NO.	PERMIT NO. ISSUE DATE EXPIRATION DATE	REGULATORY STATUS	FACILITY ACTIVITY WASTE TYPE
6018000862 2T36 'ESTHAMPTON T.S.	BRIAN GILBRIDE NY COUNTY: SUFFOLK	10890030 01/15/19 12/31/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Mixed Municipal Waste
6018000863 2T38 OUTHAMPTON STOP	 NY COUNTY: SUFFOLK	1473600674000010 04/26/19 04/25/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
6018000864 2T40 HELTER ISLAND STOP	 NY COUNTY: SUFFOLK	10891476 01/04/19 01/03/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
6018000865 2T43 'VERHEAD STOP	 NY COUNTY: SUFFOLK	1473000095000020 01/04/19 01/03/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY) Residential
6018000866 2T51 BS RUBBISH REMOVAL	 NY COUNTY: SUFFOLK	0 / / / /	Upgrade Order	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
6018000867 2T62 IORABITO VICENT	 NY COUNTY: SUFFOLK	0 / / / /	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
6018000868 2T84 SHERS ISLAND T.S.	 NY COUNTY: SUFFOLK	0 / / / /	None	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)
6018000869 2T86 UNTINGTON S.T.O.P. (T)	 NY COUNTY: SUFFOLK	1472600247000010 09/16/19 08/31/19	Permit	LARGE TRANSFER STATION (>50,000 CY ANNUALLY)

ERIIS ID EPA ID SITE CODE	FACILITY	ADDRESS	OWNER OWNER ADDRESS
36053000092 NYD980506844 152040	HUNTINGTON LANDFILL	TOWN LINE ROAD HUNTINGTON, NY 11731 COUNTY: SUFFOLK	TOWN OF HUNTINGTON 100 MAIN ST HUNTINGTON, NY
	CLASSIFICATION: SIGNIFICANT THREAT - ACTION REQUIRED		
36053000108 152087	L AND C CONCRETE CORP-JOSEPH MENAFRA	SOUTH COUNTRY ROAD QUOGE, NY 11731 COUNTY: SUFFOLK	L AND C CONCRETE CORP P O BOX 600 WESTHAMPTON, NY
	CLASSIFICATION: SIGNIFICANT THREAT - ACTION REQUIRED		
36053000060 NYD002041242 152005	HAZELTINE CORP	CUBA HILL ROAD GREENLAWN, NY 11740 COUNTY: SUFFOLK	HAZELTINE CORP CUBA HILL RD GREENLAWN, NY
	CLASSIFICATION: SIGNIFICANT THREAT - ACTION REQUIRED		

ERIS ENVIRONMENTAL DATA REPORT
NEW YORK HAZARDOUS WASTE MANIFEST
(HWMN)

RIIS Report #38967

Jan 27, 1994

RIIS ID ACILITY ID	FACILITY	FACILITY ADDRESS	OWNER CONTACT
3058009139 YD980784110	SUFFOLK COUNTY WATER AUTHORITY	ROUTE 25A WEST OF MEAD DRIVE CENTERPORT, NY 11721 COUNTY: SUFFOLK	EDWARD J ROSAVITCH
3058022628 YD986941268	SHELL OIL COMPANY	ROUTE 25A CENTERPORT, NY 11721 COUNTY: SUFFOLK	
3058000517 YP000785931	HUNTINGTON, TOWN OF	DEPOSIT ROAD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	
3058001836 YN000052150	TOWN OF HUNTINGTON INCINERATOR	PULASKI ROAD & TOWN LINE ROAD HUNTINGTON, NY 11731 COUNTY: SUFFOLK	DEPT. ENVIRONMENTAL CONT.
3058003842 YD982541203	TURBO CLEANERS D/B/A	528 B LARKFIELD ROAD E NORTHPORT, NY 11731 COUNTY: SUFFOLK	M & S PIONEER
3058007128 YD042590901	MEADOWLARK CLEANERS	370 LAKEFIELD ROAD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	
3058010644 YD982738684	AMACCO	PALASKE & LARKFIELD ROAD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	
3058011005 YP000891200	HUNTINGTOWN, TOWN OF,LANDFILL	PULASKI RD-TOWN LINE ROAD E NORTHPORT, NY 11731 COUNTY: SUFFOLK	RICHARD J BRENNAN
3058014260 YD981560642	CEDAR CLOSET	517 G LARKFIELD ROAD EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	
3058018530 YD982743577	SUN REFINING COMPANY	SUNOCO SERVICE STATION EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	
3058019316 YD986936201	CENTRAL INCORPORATION	CENTRAL COST & APRON 782 LARKFIELD RD.E.NORTHPORT, NY 11731 COUNTY: SUFFOLK	
3058020386 YD986927895	JIFFY LUBE	1809 E JERICHO TPKE & STAUVE PLACE ELWOOD, NY 11731 COUNTY: CAYUGA	
3058023396 YD986914182	NORTHPORT/EAST NORTHPORT UFSD	1100 EAST NORTHPORT MIDDLE SCH EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	FRANK J. HORN
3058026543 YD987006608	GETTY PETROLEUM CORPORATION	GULF S/S 311 LARKFIELD ROAD EAST NORTHPORT, NY 11731 COUNTY: NEW YORK	

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36058026864 NYD987022308	CONSUMER VIDEO & PHOTO INCORPORATED	1920 JERICHO TRUNPIKE EAST NORTHPORT, NY 11731 COUNTY: NASSAU	
36058027148 NYD986999233	STELLMAN ENTERPRISES	41 BRITESIDEAVE EAST NORTHPORT, NY 11731 COUNTY: SUFFOLK	PETER A STELLMAN
36058010106 NYD103628913	TOWNE CLEANERS	295 CLAY PITTS RD EAST NORTHPORT, NY 11731-3641 COUNTY: SUFFOLK	
36058001873 NYN00001A065	ISLAND PUMP AND TANK CORP	1 GRANGE STREET GREENLAWN, NY 11740 COUNTY: SUFFOLK	FRANK DIANDREA
36058003004 NYD002041242	HAZELTINE CORPORATION	CUBA HILL ROAD GREENLAWN, NY 11740 COUNTY: SUFFOLK	TEDESCO PHILIP FACILITIES
36058005907 NYD982269581	HARBORFIELDS HIGH SCHOOL	2 OLD FIELDS ROAD GREEN LAWN, LONG ISLAND, NY 11740 COUNTY: SUFFOLK	
36058007903 NYD982269524	PHOTO MAN INCORPORATED	67A BROADWAY AVENUE GREENLAWN, NY 11740 COUNTY: SUFFOLK	
36058012709 NYP000858712	ISLAND PUMP AND TANK	1 GARAGE STREET GREENLAWN, NY 11740 COUNTY: SUFFOLK	
36058013899 NYD980648158	LONG ISLAND LIGHTING COMPANY	GREENLAWN OPERATIONS CENTER HICKSVILLE, NY 11740 COUNTY: NASSAU	KAREN HELLMAN
36058014189 NYD981556160	HAZELTINE CORPORATION	CUBA HILL ROAD GREENLAWN, NY 11740 COUNTY: SUFFOLK	
36058019054 NYP000301366	NEW YORK STATE DEPT OF ENVIRONMENTAL	CONSERVATION 83 BROADWAY GREENLAWN, NY 11740 COUNTY: SUFFOLK	JOHN HOFMANN
36058023576 NYP000301663	NEW YORK STATE DEPT OF ENVIRONMENTAL	CONSERVATION MANCHESTER ROAD GREENLAWN, NY 11740 COUNTY: SUFFOLK	DAVID RAYMOND
36058026037 NYD986889574	LONG ISLAND LIGHTING	PULASKI RD GREENLAWN, NY 11740 COUNTY: SUFFOLK	WILLIAM ANCKNER
36058026179 NYD987003738	GETTY PETROLEUM CORPORATION	490E.PULASKI RD GETTY#58054 GREENLAWN, NY 11740 COUNTY: SUFFOLK	JOHN CATAPANO

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3058022683 YD986963544	L & B SERVICE STATION	7 BROADWAY GREENLAWN, NY 11740-1001 COUNTY: SUFFOLK	
3058012110 YD139268023	F & T HI TEK AUTO BODY LTD	85 BROADWAY GREENLAWN, NY 11740-1307 COUNTY: SUFFOLK	
3058009364 YD981075070	ROSELLE CLEANERSD/B/A	95 BROADWAY GREENLAWN, NY 11740-1308 COUNTY: SUFFOLK	M Y P
3058010672 YD982536930	BALLOON FRENCH CLEANERS	52 BROADWAY GREENLAWN, NY 11740-1321 COUNTY: SUFFOLK	
3058002189 YD123900292	GREENLAWN VETERINARY CLINIC	51 BROADWAY GREENLAWN, NY 11740-1322 COUNTY: SUFFOLK	
3058008639 YD077513117	HUNTINGTON UNION FREE SCHOOL	HIGH SCHOOL HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058007252 YD982721623	MORBECK CAMERAS	2880 WALT WHITMAN ROAD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058008949 YD981132517	HUNTINGTON, TOWN OF	LEVERICH PLACE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058010057 YD981130810	TOMS AUTO REFINISHING & COLLISION INC	29-C NEW YORK AVENUE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058011091 YP000894410	HUNTINGTON, TOWN OF	HUNTINGTON LANDFILL-DEPOSIT RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058012512 YD986888170	HUNTINGTON, TOWN OF	OAKWOOD GARAGE-OAKWOOD ROAD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058015434 YD986891356	CAMERA CLICK INCORPORATED	125 ROUTE 110 HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058016710 YP000864884	HUNTINGTON CRESENT COUNTRY CLUB INC	HUNTINGTON, NY 11743 COUNTY: NASSAU	
3058019460 YD986936805	102 LENOX CORPORATION	COLLISION REPR CTR-111 DEPOT HUNTINGTON STATION, NY 11743 COUNTY: SUFFOLK	

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6058019462 YD986936151	AMOCO OIL COMPANY	S/S 311 WEST JERICHO TNPKE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058020616 YD986967990	HUNTINGTON COUNTRY CLUB	WEST MAIN ST & GOOSE HILL RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	GLENN W. CREUTZ
3058020787 YD986927598	CUMBERLAND FARMS	GULF S/S 743 WALT WHITMAN RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	MICHAEL LAMAR
3058020939 YD986936227	AIM RENT-A-CAR	195 WALT WHITMAN RD- BUDGET HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058021504 YD986961662	HUNTINGTON COACH	FIFTH AVE & NINTH ST HUNTINGTON, NY 11743 COUNTY: SUFFOLK	RAY CAPONE
3058021993 YD986958429	MOBIL OIL CORPORATION	S/S 234 WALL ST/CREEK HUNTINGTON, NY 11743 COUNTY: NASSAU	MARTIN STRAUD
3058022429 YD100377654	HUNTINGTON HIGH SCHOOL	OAKWOOD & MCKAY HUNTINGTON, NY 11743 COUNTY: SUFFOLK	EMERSON C TALBOTT
3058022558 YD986974038	AMOCO OIL COMPANY	AMOCO 60516,231 ROUTE 110 HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058022674 YD986943629	HUNTINGTON TOWN OF	DOT PAINT SHOP 30 ROFAY DRIVE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	WALTER THOMAS
3058022696 Y2170022220	UNITED STATES MILITARY	1 NEW YORK AVE-NAVAL MARINE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
3058023009 YD986984052	BILL WISSER	571 E.JERICHO TURNPIKE MOBIL HUNTINGTON STATION, NY 11743 COUNTY: SUFFOLK	BILL WISSER
058023473 D986968998	SOUTH HUNTINGTON WATER	NY AVE & OLD COUNTRY ROAD SOUTH HUNTINGTON, NY 11743 COUNTY: SUFFOLK	VINCENT CRIMANDO
058024183 D986987840	COLD SPRING COUNTRY CLUB	NORTH BLVD & E. GATE DRIVE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	LOUIS DOLLINGER
058024963 D987017399	AMOCO OIL	AMOCO RTE 110 & DAWSON HUNTINGTON, NY 11743 COUNTY: SUFFOLK	FRANK ANDRYAUSHAUS

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058025438 D987008521	EXTRON OIL CORPORATION	AMOCO S/S 1729 JERICHO TPKE HUNTINGTON, NY 11743 COUNTY: SUFFOLK	
058026080 D987009693	SOUTH HUNTINGTON WATER DISTRICT	PLANT 17 OAKWOOD ROAD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	DAVID
058027228 P000907212	MYSTIC TRANSPORTATION	GETTY S/S GREENLAWN RD/25A HUNTINGTON, NY 11743 COUNTY: SUFFOLK	MEHMET ALEN
058027457 D986970689	BUDGET PRINTING	221-E MAIN ST HUNTINGTON, NY 11743 COUNTY: SUFFOLK	STEPHAN CHURCHILL
058027463 D986945541	CAUMSETSTATE PARK	LLOYD HARBOR, NY 11743 COUNTY: SUFFOLK	DUKE ROSENBAUER X-302
058027508 D987029790	LAM-TAM	VONDRAN & DEPOT RD HUNTINGTON, NY 11743 COUNTY: SUFFOLK	KIM CHAN
058001621 W000031342	HUNTINGTON TOWN STP	CREEK RD HUNTINGTON, NY 11743-2022 COUNTY: SUFFOLK	PAUL PASTORE
058017378 D000699389	SU REFINING & MARKETING	90 E MAIN ST HUNTINGTON, NY 11743-2813 COUNTY: SUFFOLK	
058011880 D982528283	H & B EUROPEAN AUTO BODY	89 E MAIN ST HUNTINGTON, NY 11743-2815 COUNTY: SUFFOLK	FORMERLY: HUNTINGTON BENZ 1/14/92
058014037 D981185457	FORT HILL CLEANERS	79 E MAIN ST HUNTINGTON, NY 11743-2815 COUNTY: NASSAU	
058004817 D002054922	HUNTINGTON PENNYSAVER	110 E MAIN ST HUNTINGTON, NY 11743-2816 COUNTY: SUFFOLK	
058020244 D986943579	AMOCO	128 E MAIN ST HUNTINGTON, NY 11743-2816 COUNTY: SUFFOLK	
058005206 D110580313	WILLIAM A HEALY JR MD PC	196 E MAIN ST HUNTINGTON, NY 11743-2922 COUNTY: SUFFOLK	
058007255 D110584539	STANLEY TOKAR MD	205 E MAIN ST HUNTINGTON, NY 11743-2923 COUNTY: SUFFOLK	

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3058020162 YD986892073	EUGENE HELLER, M.D.	205 E MAIN ST HUNTINGTON, NY 11743-2923 COUNTY: SUFFOLK	JEANINE FIELD
3058002795 YD986866572	CAMERON STUDIOSINCORPORATED	227 E MAIN ST HUNTINGTON, NY 11743-2924 COUNTY: SUFFOLK	
3058011181 YD981876576	EMERALD CLEANERS	223 E MAIN ST HUNTINGTON, NY 11743-2924 COUNTY: SUFFOLK	
3058017665 YD982728362	CRAIG ORDWAY MD	175 E MAIN ST HUNTINGTON, NY 11743-2939 COUNTY: SUFFOLK	
3058012221 YD110584794	EAST HUNTINGTON ORTHOPEDIC	166 E MAIN ST HUNTINGTON, NY 11743-2948 COUNTY: NASSAU	
3058011357 YD982792376	BAB RADIOLOGICAL	152 E MAIN ST HUNTINGTON, NY 11743-2958 COUNTY: SUFFOLK	
3058015718 YD982790164	HUNTINGTON CAT SCAN	152 E MAIN ST HUNTINGTON, NY 11743-2958 COUNTY: SUFFOLK	
3058007870 YP000880526	ISLAND TRANSPORTATION CORP	409 W MAIN ST HUNTINGTON, NY 11743-3213 COUNTY: SUFFOLK	RAYMOND BEDFORD
3058009781 YD077516979	PAMPERS CLEANERS	410 W MAIN ST HUNTINGTON, NY 11743-3246 COUNTY: SUFFOLK	
3058027190 YD982793119	HUNTINGTON COMPREHENSIVE FOOT SPECIALIST	346 NEW YORK AVE HUNTINGTON, NY 11743-3343 COUNTY: SUFFOLK	LAURA K BRAGDY
3058005749 YD981871767	D & A FLEET MAINTENANCE	743 PARK AVE HUNTINGTON, NY 11743-3912 COUNTY: SUFFOLK	
3058005097 YD982188856	GAYLORD BAG INCORPORATED	ARNOLD DR HUNTINGTON, NY 11743-3918 COUNTY: NASSAU	
3058018818 YD982792921	TEXACO UNICO	1077 PARK AVE HUNTINGTON, NY 11743-5429 COUNTY: SUFFOLK	ROCCO BRUNO
3058024941 YD986928281	GRAM CORPORATION	1000 E JERICHO TPKE HUNTINGTON, NY 11743-5433 COUNTY: SUFFOLK	VITO CAPORUSSO

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3058020157 YD986894350	LEWIS EAST CLEANERS	1157 E JERICHO TPKE HUNTINGTON, NY 11743-5436 COUNTY: SUFFOLK	
3058010593 YD981141906	AMERICAN TELEPHONE & TELEGRAPG COMPANY	1444 E JERICHO TPKE HUNTINGTON, NY 11743-5456 COUNTY: SUFFOLK	T J MCPHERSON
3058013160 YD065933442	SPORTIQUE MANUFACTURING	1249 E JERICHO TPKE HUNTINGTON, NY 11743-5611 COUNTY: SUFFOLK	
3058020819 YD986930279	EXXON COMPANY U S A	472 W JERICHO TPKE HUNTINGTON, NY 11743-6033 COUNTY: SUFFOLK	
3058021503 YD986945822	L FRENCH CLEANERS	400 W JERICHO TPKE HUNTINGTON, NY 11743-6059 COUNTY: SUFFOLK	MYUNG
3058007506 YD982274664	SCUFFYS COLLISION	305 W JERICHO TPKE HUNTINGTON, NY 11743-6332 COUNTY: SUFFOLK	FORMILY: ISLAND HILLS COLLISION
3058019371 YD986925717	EXXON COMPANY U S A	341 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY: SUFFOLK	ALDA S. POOL
3058022838 YD012754362	BURNS FORD	359 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY: SUFFOLK	MICHAEL REED
3058006810 YD114351323	WEST HILLS ANIMAL HOSPITAL	601 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	
3058012058 YD982270373	WE CARE I HOUR PHOTO	373 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	
3058018538 YD982792939	TEXACO UNICO	379 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	
3058021943 YD982793754	RICHARD STATLER D C	577 W JERICHO TPKE HUNTINGTON, NY 11743-6362 COUNTY: SUFFOLK	RICHARD STATLER
3058023942 YD986961183	POPULAR 30 MINUTE PHOTO & VIDEO	281 MAIN ST HUNTINGTON, NY 11743-6929 COUNTY: SUFFOLK	
3058000052 YD000706051	LONG ISLAND LIGHTING COMPANY	EATONS NECK ROAD NORTHPORT, NY 11768 COUNTY: SUFFOLK	NORTHPORT POWER STATION JAMES H. DAVEY

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6058002339 YD982189052	PICTURE THIS	814 B FORT SALONGA ROAD NORTH PORT, NY 11768 COUNTY: SUFFOLK	JON PALOSCIO
6058003100 YD982534927	BAY CLEANER	826A FT. SOLONGA ROAD NORTHPORT,, NY 11768 COUNTY: SUFFOLK	
6058008911 YD095591962	COW HARBOR CARRIAGE REPAIR	NORTHPORT, NY 11768 COUNTY: SUFFOLK	
6058009767 Y6360010312	VETERANS ADMINISTRATION HOSPITAL	MIDDLEVILLE ROAD NORTHPORT, NY 11768 COUNTY: SUFFOLK	W H BEVERLY
6058017586 YD986935260	AMOCO OIL COMPANY	ROUTE 25A & LAUREL ROAD NORTHPORT, NY 11768 COUNTY: SUFFOLK	
6058019396 YD986914190	NORTH PORT EAST NORTH PORT SCHOOL DIST	NORTH PORT MIDDLE SCHOOL NORTH PORT, NY 11768 COUNTY: SUFFOLK	JOHN H. BROOKS
6058021009 Y9690308011	UNITED STATES COAST GUARD STATION	LIGHTHOUSE RD EATONS NECK NORTHPORT, NY 11768 COUNTY: SUFFOLK	JOSEPH R. MALOOF
6058022088 YD986972313	EAST END MARKETING	METRO S/S 600 FT SALONGA RD NORTHPORT ALSACE PL, NY 11768 COUNTY: SUFFOLK	
6058015684 YD986894509	NORTHPORT SCHOOL DISTRICT	PO BOX 210 NORTHPORT, NY 11768-0210 COUNTY: SUFFOLK	
6058002171 YD068073071	NORTHPORT YACHT CLUB	BLUFF POINT RD NORTHPORT, NY 11768-1516 COUNTY: SUFFOLK	
6058007840 YD982742702	FORT SOLONGA CLEANERS	1019 FORT SALONGA RD NORTHPORT, NY 11768-2270 COUNTY: SUFFOLK	
3058001853 YN00001A108	EFFICIENCY CONTRACTOR	104 MIDDLEVILLE RD NORTHPORT, NY 11768-2346 COUNTY: SUFFOLK	KEN MCROBB /DBA
3058009711 YD093304939	COLONIAL CLEANERS	10-6 FORT SALONGA RD NORTHPORT, NY 11768-2513 COUNTY: SUFFOLK	LARRY HANSEN
3058005967 YD982716300	AMERADA HESS CORPORATION	412 FORT SALONGA RD NORTHPORT, NY 11768-3046 COUNTY: SUFFOLK	

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36058021052 NYD986964443	MULLEN HAUPT MOVERS	404 ROUTE 25A NORTHPORT, NY 11768-3046 COUNTY: SUFFOLK	
36058016475 NYD021139977	CHIC CLEANERS	444 FORT SALONGA RD NORTHPORT, NY 11768-3047 COUNTY: SUFFOLK	
36058009203 NYD077401206	OHLERT RUGGIERE INC INSURANCE / ORI	700 FORT SALONGA RD NORTHPORT, NY 11768-3147 COUNTY: SUFFOLK	FRMLY: ONE HOUR MARTINIZING DOUG GEROWSKI
36058017070 NYD982529141	CRYSTAL DRIVE IN CLEANERS	700 FORT SALONGA RD NORTHPORT, NY 11768-3147 COUNTY: SUFFOLK	
36058017013 NYD986878346	NORTH PORT EAST NORTH PORT UFFP	110 ELWOOD RD NORTHPORT, NY 11768-3455 COUNTY: SUFFOLK	
36058015387 NYD982797029	SHELL OIL COMPANY	SERVICE STATION RT25A & LAUREL NORTHPORT, NY COUNTY: NASSAU	
36058021639 NYD986943595	AMOCO OIL COMPANY	687 FORT SOLONGA RD STA 60003 NORTHPORT, NY COUNTY: NASSAU	

ERIIS ID SPILL NO. SPILL NAME	SPILL LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
6021009385 006097 INK	209 JACKSON CRES CENTERPORT, NY 11721-1054 COUNTY:SUFFOLK	09/03/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	/ /
SPILL HISTORY:					
6021007842 101669 PRINGER SERVICE	205 PROSPECT RD CENTERPORT, NY 11721-1149 COUNTY:SUFFOLK	05/11/1991 SELF SPILLER GROUNDWATER	PETROLEUM #2 FUEL 7.00 GAL	N	05/13/1991
SPILL HISTORY:					
6021059185 008900 ILCO	LITTLE NECK RD CENTERPORT, NY 11721-1613 COUNTY:SUFFOLK	11/13/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 1.00 GAL	N	11/14/1990
SPILL HISTORY:					
6021009096 109270 INK	6 FOREST DR CENTERPORT, NY 11721-1714 COUNTY:SUFFOLK	11/30/1991 SELF SPILLER ON LAND	RAW SEWAGE DISCHARGE 0.00 GAL	N	12/01/1991
SPILL HISTORY:					
6021009765 901943 INK.	WASHINGTON DR CENTERPORT, NY 11721-1816 COUNTY:SUFFOLK	05/25/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 0.00	N	/ /
SPILL HISTORY:					
6021009156 109640 AFETY KLEEN	5TH AVE EAST NORTHPORT, NY 11731-2500 COUNTY:SUFFOLK	12/10/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM 1.00 GAL	N	12/30/1991
SPILL HISTORY:					
6021042658 802787 ASSAU BLUE FLAME	107 PAMELA LN EAST NORTHPORT, NY 11731-3312 COUNTY:SUFFOLK	06/28/1987 SELF SPILLER GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	06/12/1989
SPILL HISTORY:					
6021009407 006445 NK	83 BROADWAY GREENLAWN, NY 11740-1307 COUNTY:SUFFOLK	09/12/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00 GAL	N	/ /
SPILL HISTORY:					
6021013596 110845 IFFORDS ENERGY	855 PULASKI RD GREENLAWN, NY 11740-1712 COUNTY:SUFFOLK	01/18/1992 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	01/21/1992
SPILL HISTORY:					

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36021008353 9105374 LILCO	E SHORE RD HALESITE, NY 11743-1129 COUNTY:SUFFOLK	08/17/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 1.00 GAL	N	08/19/1991
SPILL HISTORY:					
36021010782 8809978 HUNTINGTON YACHT CLUB	E SHORE RD HUNTINGTON, NY 11743-1129 COUNTY:SUFFOLK	03/27/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	07/26/1991
SPILL HISTORY:					
36021020984 9205193 UNK	E SHORE RD HUNTINGTON, NY 11743-1129 COUNTY:SUFFOLK	08/05/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	RAW SEWAGE DISCHARGE SEWAGE 0.00 GAL	N	08/06/1992
SPILL HISTORY:					
36021029883 8703920 HUNTINGTON STP	CREEK RD HUNTINGTON, NY 11743-2022 COUNTY:SUFFOLK	08/07/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	08/19/1987
SPILL HISTORY:					
36021043253 8807631 UNK	CREEK RD HUNTINGTON, NY 11743-2022 COUNTY:SUFFOLK	12/18/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	RAW SEWAGE DISCHARGE RAW SEWAGE 0.00 GAL	N	12/20/1988
SPILL HISTORY:					
36021042825 8803901 UNK	W SHORE RD HUNTINGTON, NY 11743-2041 COUNTY:SUFFOLK	08/03/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 30.00 GAL	N	08/22/1988
SPILL HISTORY:					
36021045052 8910669 UNK	W SHORE RD HUNTINGTON, NY 11743-2041 COUNTY:SUFFOLK	02/08/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM DIESEL 0.00 GAL	N	02/14/1990
SPILL HISTORY:					
36021044075 8904072 UNK	PARK AVE HUNTINGTON, NY 11743-2701 COUNTY:SUFFOLK	07/25/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	07/26/1989
SPILL HISTORY:					
36021027877 8607306 SUN REFINING	90 E MAIN ST HUNTINGTON, NY 11743-2813 COUNTY:SUFFOLK	03/02/1987 GAS STATION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	09/26/1990
SPILL HISTORY:					

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36021042241 8805698 JESSE SERVICE CENTER	90 E MAIN ST HUNTINGTON, NY 11743-2813 COUNTY:SUFFOLK	10/03/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM DIESEL 0.00 GAL	N	09/24/1990
SPILL HISTORY:					
36021025469 9210764 AMOCO S/S	128 E MAIN ST HUNTINGTON, NY 11743-2816 COUNTY:SUFFOLK	09/23/1992 GAS STATION IN SEWER (FUMES)	NON PETRO/NON HAZMAT INDUSTRIAL FLOOR CLE 0.00 GAL	N	12/28/1992
SPILL HISTORY:					
36021042889 8804477 GETTY SS	406 W MAIN ST HUNTINGTON, NY 11743-3246 COUNTY:SUFFOLK	08/22/1988 GAS STATION IN SEWER (FUMES)	PETROLEUM GASOLINE 35.00 GAL	N	09/01/1988
SPILL HISTORY:					
36021010259 8701295 BONEL EQUIPT RENTAL	PLATT PL HUNTINGTON, NY 11743-3528 COUNTY:SUFFOLK	05/15/1987 TRACTOR TRAILER (COMMERCIAL VEHICLE) ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	05/18/1987
SPILL HISTORY:					
36021030074 8705887 BAYLIS & BAYLIS	GRANDVIEW ST HUNTINGTON, NY 11743-3535 COUNTY:SUFFOLK	10/13/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 2.00 GAL	N	10/14/1987
SPILL HISTORY:					
36021025220 9210468 FORMER GAS STATION	733 PARK AVE HUNTINGTON, NY 11743-3911 COUNTY:SUFFOLK	12/09/1992 GAS STATION GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /
SPILL HISTORY:					
36021059780 9012889 DEJENA TRUCK	743 PARK AVE HUNTINGTON, NY 11743-3912 COUNTY:SUFFOLK	03/18/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	03/19/1991
SPILL HISTORY:					
36021043886 8902806 ANTERINO CESSPOOL	630 NEW YORK AVE WOODLAND HUNTINGTON, NY 11743-4216 COUNTY:SUFFOLK	06/19/1989 TRACTOR TRAILER (COMMERCIAL VEHICLE) ON LAND	PETROLEUM DIESEL 0.00 GAL	N	07/17/1989
SPILL HISTORY:					
36021018699 9202523 SCOTT RIEHL RESIDENCE	865 PARK AVE HUNTINGTON, NY 11743-4520 COUNTY:SUFFOLK	06/01/1992 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	06/03/1992
SPILL HISTORY:					

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36021044000 8903563 CHIN RESIDENCE	893 PARK AVE HUNTINGTON, NY 11743-4520 COUNTY:SUFFOLK	07/10/1989 SELF SPILLER GROUNDWATER	PETROLEUM #2 FUEL 225.00 GAL	N	09/11/1989
SPILL HISTORY:					
36021059525 9011259 ELL GREEN SOD FARM	LITTLE PLAINS RD HUNTINGTON, NY 11743-4530 COUNTY:SUFFOLK	01/22/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN PEST/HERBICIDES 0.00 GAL	N	01/25/1991
SPILL HISTORY:					
36021043763 8902022 LILCO	VALLEY VIEW CT HUNTINGTON, NY 11743-5021 COUNTY:SUFFOLK	05/29/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 0.00	N	06/12/1989
SPILL HISTORY:					
36021059491 9011014 EUGENTI RESIDENCE	1046 PARK AVE HUNTINGTON, NY 11743-5426 COUNTY:SUFFOLK	01/16/1991 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	01/17/1991
SPILL HISTORY:					
36021008365 9105424 MOBIL S/S	1075 PARK AVE HUNTINGTON, NY 11743-5429 COUNTY:SUFFOLK	08/06/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /
SPILL HISTORY:					
36021043539 8900241 LILCO	1223 E JERICHO TPKE HUNTINGTON, NY 11743-5611 COUNTY:SUFFOLK	04/09/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM 25.00 GAL	N	04/19/1989
SPILL HISTORY:					
36021019660 9203580 EXXON OIL	472 W JERICHO TPKE HUNTINGTON, NY 11743-6033 COUNTY:SUFFOLK	06/26/1992 GAS STATION ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	06/26/1992
SPILL HISTORY:					
36021059016 9007602 EXXON	472 W JERICHO TPKE HUNTINGTON, NY 11743-6033 COUNTY:SUFFOLK	10/10/1990 GAS STATION ON LAND	PETROLEUM GASOLINE 1.00 GAL	N	10/12/1990
SPILL HISTORY:					
36021007560 9102858 COUNTRY VOLVO	345 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY:SUFFOLK	05/08/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	07/26/1991
SPILL HISTORY:					

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6021009379 005980 XXON	341 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY:SUFFOLK	08/29/1990 GAS STATION GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /
PILL HISTORY:					
6021027938 708934 OUNTRY LINCOLN MERCURY	345 W JERICHO TPKE HUNTINGTON, NY 11743-6334 COUNTY:SUFFOLK	01/20/1988 NON COMMERCIAL FACILITY/INSTITUTION IN SEWER (FUMES)	PETROLEUM 0.00 GAL	N	05/15/1990
PILL HISTORY:					
6021043995 903542 ACK WHALEN	SHEPPARD LN HUNTINGTON, NY 11743-6412 COUNTY:SUFFOLK	07/09/1989 SELF SPILLER ON LAND	UNKNOWN ENGINE DEGREASER 0.00 GAL	N	07/31/1989
PILL HISTORY:					
6021015108 112853 AINBOW FANTASY	273 MAIN ST HUNTINGTON, NY 11743-6929 COUNTY:SUFFOLK	03/18/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	03/18/1992
PILL HISTORY:					
6021029714 702478 ATON NECK C.G.	LIGHTHOUSE RD NORTHPORT, NY 11768-1046 COUNTY:SUFFOLK	06/24/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 0.00 GAL	N	10/21/1987
PILL HISTORY:					
6021028216 602123 ILCO	8 EATONS NECK RD NORTHPORT, NY 11768-1102 COUNTY:SUFFOLK	06/28/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 100.00 GAL	N	08/12/1986
PILL HISTORY:					
6021021314 205574 HORVINCENT VESSEL	ASHAROKEN AVE NORTHPORT, NY 11768-1164 COUNTY:SUFFOLK	08/14/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 0.00 GAL	N	09/11/1992
PILL HISTORY:					
6021057939 000687 LCO	ASHAROKEN AVE NORTHPORT, NY 11768-1164 COUNTY:SUFFOLK	04/19/1990 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM GASOLINE 3.00 GAL	N	04/23/1990
PILL HISTORY:					
6021027990 600331 LCO	NORTH AVE NORTHPORT, NY 11768-1257 COUNTY:SUFFOLK	04/14/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 1.00 GAL	N	04/16/1986
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36021044005 8903608 SEYMOURS BOAT YARD MARINA	BAYVIEW AVE NORTHPORT, NY 11768-1502 COUNTY:SUFFOLK	07/10/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	07/19/1989
SPILL HISTORY:					
36021024802 9209960 UNK	MAIN ST NORTHPORT, NY 11768-1722 COUNTY:SUFFOLK	11/26/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	02/03/1993
SPILL HISTORY:					
36021059845 9013311 UNK LILCO	OCEAN AVE NORTHPORT, NY 11768-1811 COUNTY:SUFFOLK	03/31/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM PCB OIL 10.00 GAL	N	04/24/1991
SPILL HISTORY:					
36021068539 9213664 FORT SALONGA SERVICE	1011 FORT SALONGA RD NORTHPORT, NY 11768-2257 COUNTY:SUFFOLK	03/11/1993 GAS STATION GROUNDWATER	PETROLEUM #2 FUEL 0.00 GAL	N	/ /
SPILL HISTORY:					
36021008579 9106554 UNK	TARLETON LN NORTHPORT, NY 11768-2533 COUNTY:SUFFOLK	09/17/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	09/20/1991
SPILL HISTORY:					
36021042529 8801812 LI OYSTER FARMS	WOODBINE AVE NORTHPORT, NY 11768-2817 COUNTY:SUFFOLK	05/26/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM DIESEL 0.00 GAL	N	06/01/1988
SPILL HISTORY:					
36021042628 8802595 SCOOTER ROOTER SEWER CO	325 ROUTE 25A NORTHPORT, NY 11768-2848 COUNTY:SUFFOLK	06/21/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	RAW SEWAGE DISCHARGE RAW SEWAGE 0.00 GAL	N	06/21/1988
SPILL HISTORY:					
36021025711 9211068 DANIEL GALE AGENCY	408 FORT SALONGA RD NORTHPORT, NY 11768-3046 COUNTY:SUFFOLK	12/23/1992 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 3.00 GAL	N	02/03/1993
SPILL HISTORY:					
36021008862 9108118 MOBIL STATION	539 ROUTE 25A NORTHPORT, NY 11768-3048 COUNTY:SUFFOLK	10/30/1991 GAS STATION GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /
SPILL HISTORY:					

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36021018257 3202018 MOBIL S/S	539 ROUTE 25A NORTHPORT, NY 11768-3048 COUNTY:SUFFOLK	05/13/1992 GAS STATION ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	05/20/1992
SPILL HISTORY:					
36021008025 3103192 OSS GIFFORD OIL CO	WEST FIELD DR & NO DRIVE CENTERPORT, NY COUNTY:SUFFOLK	06/20/1991 PASSENGER VEHICLE ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	06/24/1991
SPILL HISTORY:					
36021008553 3106382 CENTERPORT MARINA	CENTER SHORE ROAD CENTERPORT, NY COUNTY:SUFFOLK	09/08/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 5.00 GAL	N	04/30/1992
SPILL HISTORY:					
36021008586 3106583 JNK	OFF LITTLE NECK ROAD CENTERPORT, NY COUNTY:SUFFOLK	09/18/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	UNKNOWN 0.00 GAL	N	09/19/1991
SPILL HISTORY:					
36021018001 3201758 JNK	WESTFIELD DR & CENTER SHO CENTERPORT, NY COUNTY:SUFFOLK	05/12/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN AIR	UNKNOWN FOUL ODOR 0.00 GAL	N	07/27/1992
SPILL HISTORY:					
36021018884 3202742 CENTERPORT MARINA	CENTER SHORE ROAD CENTERPORT, NY COUNTY:SUFFOLK	06/06/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	07/27/1992
SPILL HISTORY:					
36021028621 3605303 ILCO	GLEN CRESCENT & STONY CENTERPORT, NY COUNTY:SUFFOLK	11/20/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 25.00 GAL	N	05/07/1987
SPILL HISTORY:					
36021029460 700486 NK	RTE 25A/CENTER SHORE ROAD CENTERPORT, NY COUNTY:SUFFOLK	04/16/1987 TANK TRUCK IN SEWER (FUMES)	PETROLEUM #2 FUEL 0.00 GAL	N	04/17/1987
SPILL HISTORY:					
36021029681 702160 NK	11 WEST FIELD DRIVE CENTERPORT, NY COUNTY:SUFFOLK	06/16/1987 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 15.00 GAL	N	07/13/1987
SPILL HISTORY:					

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36021030270 8708246 DAUGHTERS FUEL OIL	CENTERSHORE ROAD CENTERPORT, NY COUNTY:SUFFOLK	12/23/1987 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 100.00 GAL	N	01/11/1988
SPILL HISTORY:					
36021043491 8809923 UNK	LITTLE NECK RD/MARHOPPER CENTERPORT, NY COUNTY:SUFFOLK	03/24/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 50.00 GAL	N	03/01/1990
SPILL HISTORY:					
36021043985 8903483 TONG TINE RESTAURANT	CENTER SHORE RD/RTE 25 CENTERPORT, NY COUNTY:SUFFOLK	07/06/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	RAW SEWAGE DISCHARGE RAW SEWAGE 0.00 GAL	N	07/07/1989
SPILL HISTORY:					
36021058375 9003521 LILCO	EASTMOND STREET CENTERPORT, NY COUNTY:SUFFOLK	06/27/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM 2.00 GAL	N	07/19/1990
SPILL HISTORY:					
36021009530 9009287 JIFFY LUBE	1809 EAST JERICHO TPKE ELWOOD, NY COUNTY:SUFFOLK	11/26/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	/ /
SPILL HISTORY:					
36021014901 9112568 SHELL S/S	ELWOOD AVENUE ELWOOD, NY COUNTY:SUFFOLK	02/06/1992 GAS STATION GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	/ /
SPILL HISTORY:					
36021016780 9202617 MONTAUK CARTING	TOWNLINE ROAD ELWOOD, NY COUNTY:SUFFOLK	06/03/1992 TRACTOR TRAILER (COMMERCIAL VEHICLE) IN SEWER (FUMES)	PETROLEUM #2 FUEL 30.00 GAL	N	/ /
SPILL HISTORY:					
36021042691 8803004 HUNTINGTON HIGHWAY	ROFAY DRIVE ELWOOD, NY COUNTY:NASSAU	07/06/1988 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	NON PETRO/NON HAZMAT ROAD SEALER 0.00 GAL	N	07/28/1988
SPILL HISTORY:					
36021043421 8809169 UNK	MASON CT OFF LARKFIELD RD ELWOOD, NY COUNTY:SUFFOLK	02/24/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	HAZARDOUS MATERIAL SYRINGES/MEDICATION 0.00 GAL	N	04/04/1989
SPILL HISTORY:					

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16021057902 1000471 TOWN OF HUNTINGTON GARAGE	ROFAY DRIVE ELWOOD, NY COUNTY:SUFFOLK	04/13/1990 TANK TRUCK ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	04/18/1990
SPILL HISTORY:					
16021058372 1003496 ASHRAF MOHAMMED	92 ALBERTA DRIVE ELWOOD, NY COUNTY:SUFFOLK	06/27/1990 SELF SPILLER GROUNDWATER	PETROLEUM GASOLINE 0.00 GAL	N	08/27/1990
SPILL HISTORY:					
16021008241 1104657 UNK	MANCHESTER RD GREENLAWN, NY COUNTY:SUFFOLK	07/30/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 50.00 GAL	N	08/02/1991
SPILL HISTORY:					
16021008641 1106881 UNK	83B RAILROAD AVE GREENLAWN, NY COUNTY:SUFFOLK	09/26/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 20.00 GAL	N	04/28/1992
SPILL HISTORY:					
16021008997 1108770 UNK	MANOR ROAD NORTH GREENLAWN, NY COUNTY:SUFFOLK	11/16/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	HAZARDOUS MATERIAL MEDICAL WASTE 0.00 GAL	N	11/18/1991
SPILL HISTORY:					
16021009898 1905346 HAZELTINE CORP	CUBA HILL ROAD GREENLAWN, NY COUNTY:SUFFOLK	08/30/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	01/07/1992
SPILL HISTORY:					
16021010334 705213 UNK	1 ARNOLD DRIVE GREENLAWN, NY COUNTY:SUFFOLK	09/22/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN POSS-LACQUER THINNER 45.00 GAL	N	/ /
SPILL HISTORY:					
16021010783 810042 ILCO	PULASKI ROAD GREENLAWN, NY COUNTY:SUFFOLK	03/28/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 90.00 GAL	N	12/02/1991
SPILL HISTORY:					
16021014921 112593 LCO	30 PINEHOLLOW ROAD GREENLAWN, NY COUNTY:SUFFOLK	03/10/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM PCB OIL 1.00 GAL	N	03/11/1992
SPILL HISTORY:					

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36021020776 9204936 KLEIN & EVERSOL	LITTLE PLAINS ROAD GREENLAWN, NY COUNTY:SUFFOLK	07/30/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	/ /
SPILL HISTORY:					
36021023612 9208452 TC CARTING	BRENNAN ST GREENLAWN, NY COUNTY:SUFFOLK	10/22/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 15.00 GAL	N	10/22/1992
SPILL HISTORY:					
36021026543 9212091 MYSTIC BULK CARRIER	GREENLAWN RD & RTE 25A GREENLAWN, NY COUNTY:SUFFOLK	01/22/1993 GAS STATION ON LAND	PETROLEUM GASOLINE 5.00 GAL	N	01/25/1993
SPILL HISTORY:					
36021029005 8607948 LILCO	GREENLAWN SUB STATION GREENLAWN, NY COUNTY:SUFFOLK	03/27/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 2.00 GAL	N	07/13/1987
SPILL HISTORY:					
36021029588 8701373 F&T AUTO COLLISION	BROADWAY GREENLAWN, NY COUNTY:SUFFOLK	05/19/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	HAZARDOUS MATERIAL THINNERS 0.00 GAL	N	07/07/1987
SPILL HISTORY:					
36021030174 8707069 MR.STAHL	26 STUYVESENT STREET GREENLAWN, NY COUNTY:SUFFOLK	11/18/1987 SELF SPILLER GROUNDWATER	PETROLEUM #2 FUEL 190.00 GAL	N	01/11/1988
SPILL HISTORY:					
36021030397 8709398 LILCO	PULASKI ROAD GREENLAWN, NY COUNTY:SUFFOLK	02/04/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 3.00 GAL	N	02/09/1988
SPILL HISTORY:					
36021030588 8710770 GEORGE BYERS FUEL OIL	GREENLAWN RD & TILDEN LAN GREENLAWN, NY COUNTY:SUFFOLK	03/25/1988 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	04/21/1988
SPILL HISTORY:					
36021042423 8800713 CHEMLAWN	HARMON RD AT CUBA HILL RD GREENLAWN, NY COUNTY:SUFFOLK	04/22/1988 TANK TRUCK ON LAND	NON PETRO/NON HAZMAT PESTICIDES 10.00 GAL	N	04/28/1988
SPILL HISTORY:					

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16021044174 1904690 .ILCO	WEST LAKE ROAD GREENLAWN, NY COUNTY:SUFFOLK	08/11/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM 50.00 GAL	N	10/27/1989
SPILL HISTORY:					
16021045225 1911823 JNK	TAYLOR AVE & BULOVA AVE GREENLAWN, NY COUNTY:SUFFOLK	03/14/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	03/27/1990
SPILL HISTORY:					
16021057868 1000246 SUSPECT SURF SIDE DELI	MILL DAM BOAT RAMP GREENLAWN, NY COUNTY:SUFFOLK	04/07/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	RAW SEWAGE DISCHARGE RAW SEWAGE 0.00 GAL	N	04/09/1990
SPILL HISTORY:					
16021058353 1003414 HAZELTINE	CUBA HILL ROAD GREENLAWN, NY COUNTY:SUFFOLK	06/25/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	HAZARDOUS MATERIAL TETRACHLOROETHANE 0.00 GAL	N	06/25/1990
SPILL HISTORY:					
16021059039 1007807 .ILCO	PULASKI RD W/O LAKE RD GREENLAWN, NY COUNTY:SUFFOLK	10/17/1990 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM NON-PCB OIL 10.00 GAL	N	10/18/1990
SPILL HISTORY:					
16021059211 1009032 JNK	CUBA HILL ROAD GREENLAWN, NY COUNTY:SUFFOLK	11/14/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 0.00 GAL	N	11/30/1990
SPILL HISTORY:					
16021009876 1904490 ANTORINO SEPTIC	YOUNG HILL ROAD HALESITE, NY COUNTY:SUFFOLK	08/05/1989 TRACTOR TRAILER (COMMERCIAL VEHICLE) ON LAND	PETROLEUM DIESEL 25.00 GAL	N	11/01/1989
SPILL HISTORY:					
16021009877 1904494 JNK	YOUNG HILL ROAD HALESITE, NY COUNTY:SUFFOLK	08/05/1989 PASSENGER VEHICLE ON LAND	PETROLEUM DIESEL 25.00 GAL	N	/ /
SPILL HISTORY:					
16021043534 1900224 JNK	MILBURN STREET HALESITE, NY COUNTY:SUFFOLK	04/08/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 20.00 GAL	N	04/08/1989
SPILL HISTORY:					

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6021045261 912005 NK	NY AVE & CREEK ROAD HALESITE, NY COUNTY:SUFFOLK	03/19/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	03/21/1990
PILL HISTORY:					
5021007454 101339 ORTHPORT POWER STATION	ASKAROKEN AVENUE NORTHPORT, NY COUNTY:SUFFOLK	05/02/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 2500.00 GAL	N	/ /
PILL HISTORY:					
5021008158 104228 I OYSTER FARM	WATERSIDE AVE & EATON NEC NORTHPORT, NY COUNTY:SUFFOLK	07/20/1991 TRACTOR TRAILER (COMMERCIAL VEHICLE) IN AIR	PETROLEUM GASOLINE 0.00 GAL	N	07/22/1991
PILL HISTORY:					
5021008228 104595 LCO	N/O NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	07/29/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	UNKNOWN MINERAL OIL 0.00 GAL	N	07/30/1991
PILL HISTORY:					
5021008520 106192 LCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	09/09/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM WASTE OIL 1.00 GAL	N	09/10/1991
PILL HISTORY:					
5021008728 107359 VK SANITATION TRUCK	SAILFISH PL/NAUTILUS ROAD NORTHPORT, NY COUNTY:SUFFOLK	10/09/1991 TRACTOR TRAILER (COMMERCIAL VEHICLE) GROUNDWATER	PETROLEUM WASTE OIL 0.00 GAL	N	09/14/1992
PILL HISTORY:					
5021008891 08265 .CO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	11/02/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 200.00 GAL	N	12/06/1991
PILL HISTORY:					
021009143 09551 .CO	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	12/08/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #4 FUEL 20000.00 GAL	N	12/16/1991
PILL HISTORY:					
021009345 05282 .CO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	08/13/1990 NON COMMERCIAL FACILITY/INSTITUTION SURFACE WATERS	PETROLEUM #6 FUEL 10.00 GAL	N	01/08/1992
PILL HISTORY:					

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36021009721 8900644 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	04/20/1989 MAJOR OIL FACILITY (>400K) SURFACE WATERS	NON PETRO/NON HAZMAT CITRIC ACID 0.00 GAL	N	/ /
SPILL HISTORY:					
36021009976 8909035 NORTHPORT VETERANS HOSP	MIDDLEVILLE ROAD NORTHPORT, NY COUNTY:SUFFOLK	12/13/1989 NON COMMERCIAL FACILITY/INSTITUTION GROUNDWATER	PETROLEUM #4 FUEL 0.00 GAL	N	/ /
SPILL HISTORY:					
36021010100 3402222 FIREHOUSE 5 S/S	NORTHPORT, NY COUNTY:SUFFOLK	11/12/1984 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 60.00 GAL	N	/ /
SPILL HISTORY:					
36021010364 3706972 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	11/16/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 100.00 GAL	N	/ /
SPILL HISTORY:					
36021010780 3809909 NORTHPORT MARINA	25A & WOODBINE NORTHPORT, NY COUNTY:SUFFOLK	03/23/1989 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	UNKNOWN RED FLUID/RUSTY COLO 0.00 GAL	N	/ /
SPILL HISTORY:					
36021013260 9110405 LILCO	WATERSIDE ROAD NORTHPORT, NY COUNTY:SUFFOLK	01/04/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 1.00 GAL	N	01/07/1992
SPILL HISTORY:					
36021013504 9110726 LILCO/UNK	WATERSIDE AVE POWER STATI NORTHPORT, NY COUNTY:SUFFOLK	01/14/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 2.00 GAL	N	01/31/1992
SPILL HISTORY:					
36021014312 9111794 LILCO	WATERSIDE AVE & RTE 25 NORTHPORT, NY COUNTY:SUFFOLK	02/17/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 56000.00 GAL	N	/ /
SPILL HISTORY:					
36021016992 9200523 ISLAND RUBBISH REMOVAL	NAUTILUS STREET NORTHPORT, NY COUNTY:SUFFOLK	04/14/1992 TRACTOR TRAILER (COMMERCIAL VEHICLE) ON LAND	PETROLEUM WASTE OIL 20.00 GAL	N	04/28/1992
SPILL HISTORY:					

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6021021184 205422 ILCO	EASTON NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	08/11/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM WASTE OIL 1.00 GAL	N	08/11/1992
PILL HISTORY:					
6021021809 206200 NK	BASIN ON WOODHULL NORTHPORT, NY COUNTY:SUFFOLK	08/28/1992 SELF SPILLER ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	09/02/1992
PILL HISTORY:					
6021021913 206324 OWERSTATION	WATERSIDE AVE NORTHPORT, NY COUNTY:SUFFOLK	09/01/1992 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 4.00 GAL	N	09/21/1992
PILL HISTORY:					
6021022807 207439 LCO	INLET HARBOR UNITS 2 -3 NORTHPORT, NY COUNTY:SUFFOLK	09/28/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM WASTE OIL 10.00 GAL	N	09/28/1992
PILL HISTORY:					
6021023022 207709 LCO	RTE 25A & MAIN ST NORTHPORT, NY COUNTY:SUFFOLK	10/03/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM NON-PCB OIL 1.00 GAL	N	10/03/1992
PILL HISTORY:					
6021023304 208035 LCO	BREAD & CHEESE HOLLOW RD NORTHPORT, NY COUNTY:SUFFOLK	10/12/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 0.00 GAL	N	10/13/1992
PILL HISTORY:					
6021023617 208458 NK	ODL BRIDGE ROAD NORTHPORT, NY COUNTY:SUFFOLK	10/22/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 2.00 GAL	N	10/28/1992
PILL HISTORY:					
6021023689 208556 LCO	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	10/24/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	NON PETRO/NON HAZMAT REGENERATION WATER 12000.00 GAL	N	02/01/1993
PILL HISTORY:					
6021024055 209026 LCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	11/04/1992 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	/ /
PILL HISTORY:					

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36021028191 8601946 LILCO	WATERSIDE AVE& EAT.NK RD. NORTHPORT, NY COUNTY:SUFFOLK	06/20/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 20.00	N	05/07/1987
SPILL HISTORY:					
36021028321 8602736 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	07/26/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 100.00 GAL	N	05/07/1987
SPILL HISTORY:					
36021028359 8603023 NORTHPORT MARINE CENTER	RTE 25A NORTHPORT, NY COUNTY:SUFFOLK	08/05/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	11/26/1986
SPILL HISTORY:					
36021028375 8603117 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	08/11/1986 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 150.00 GAL	N	09/19/1986
SPILL HISTORY:					
36021028413 8603412 RICE TANK CLEANING	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	08/22/1986 TRACTOR TRAILER (COMMERCIAL VEHICLE) ON LAND	PETROLEUM WASTE OIL 50.00 GAL	N	11/04/1986
SPILL HISTORY:					
36021028435 8603610 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	09/02/1986 MAJOR OIL FACILITY (>400K) ON LAND	UNKNOWN Ind. wastewater 10000.00 GAL	N	04/22/1987
SPILL HISTORY:					
36021028565 8604743 ISLAND TRANSPORTATION	NORTHPORT VA HOSPITAL NORTHPORT, NY COUNTY:SUFFOLK	10/23/1986 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 100.00 GAL	N	11/17/1986
SPILL HISTORY:					
36021028573 8604841 NORTHPORT VA HOSPITAL	NORTHPORT VA HOSPITAL NORTHPORT, NY COUNTY:SUFFOLK	10/25/1986 NON COMMERCIAL FACILITY/INSTITUTION IN SEWER (FUMES)	PETROLEUM DIESEL 0.00 GAL	N	03/04/1987
SPILL HISTORY:					
36021028622 8605329 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	11/21/1986 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 25.00 GAL	N	05/07/1987
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6021028633 605432 ILCO	LILCO POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	11/26/1986 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 50.00 GAL	N	05/07/1987
PILL HISTORY:					
6021028648 605452 ILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	11/27/1986 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 1.00 GAL	N	05/07/1987
PILL HISTORY:					
6021028776 606293 ILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	01/09/1987 MAJOR OIL FACILITY (>400K) SURFACE WATERS	PETROLEUM 5.00 GAL	N	05/07/1987
PILL HISTORY:					
6021028834 606731 IORTHPORT STP	WOODBIN/BEACH AVENUE NORTHPORT, NY COUNTY:SUFFOLK	02/03/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM #2 FUEL 100.00 GAL	N	02/03/1987
PILL HISTORY:					
6021028846 606839 TC	VETS MEDICAL CENTER NORTHPORT, NY COUNTY:SUFFOLK	02/07/1987 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	02/09/1987
PILL HISTORY:					
6021029457 700472 'A HOSPITAL	MIDDLEVILLE ROAD NORTHPORT, NY COUNTY:SUFFOLK	04/08/1987 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	UNKNOWN CLEANING SOLVENTS 0.00 GAL	N	11/16/1987
PILL HISTORY:					
6021029510 700873 ILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	04/30/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 0.00	N	04/30/1987
PILL HISTORY:					
6021029530 701022 ILCO	NORTHPORT #2 DAY OIL NORTHPORT, NY COUNTY:SUFFOLK	05/06/1987 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 50.00 GAL	N	05/18/1987
PILL HISTORY:					
6021029581 701300 LCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	05/16/1987 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 5.00 GAL	N	05/18/1987
PILL HISTORY:					

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36021029584 8701337 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	05/18/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #6 FUEL 0.00 GAL	N	07/15/1987
SPILL HISTORY:					
36021029640 8701770 UNK	END OF MAIN STREET NORTHPORT, NY COUNTY:SUFFOLK	06/02/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM DIESEL 0.00 GAL	N	06/09/1987
SPILL HISTORY:					
36021029748 8702785 FIRE HOUSE GAS STATION	RTE 25A & RESEVIOR AVENUE NORTHPORT, NY COUNTY:SUFFOLK	07/08/1987 GAS STATION ON LAND	PETROLEUM GASOLINE 5.00 GAL	N	07/09/1987
SPILL HISTORY:					
36021029865 8703774 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	08/07/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #6 FUEL 10.00 GAL	N	08/19/1987
SPILL HISTORY:					
36021029866 8703782 LILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	08/07/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 20.00 GAL	N	08/19/1987
SPILL HISTORY:					
36021029908 8704174 L.I. OYSTER FARMS	L.I. OYSTER FARMS NORTHPORT, NY COUNTY:SUFFOLK	08/19/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 0.00 GAL	N	08/27/1987
SPILL HISTORY:					
36021029923 8704255 SLAND TRANSPORTATION CO.	MIDDLVILLE ROAD NORTHPORT, NY COUNTY:SUFFOLK	08/22/1987 TANK TRUCK IN SEWER (FUMES)	PETROLEUM #2 FUEL 200.00 GAL	N	09/03/1987
SPILL HISTORY:					
36021029950 8704499 LILCO	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	08/31/1987 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 9.00 GAL	N	09/23/1987
SPILL HISTORY:					
36021030027 8705301 LILCO	NORTHPORT POWER STATION NORTHPORT, NY COUNTY:SUFFOLK	09/24/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 15.00 GAL	N	10/14/1987
SPILL HISTORY:					

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6021030188 707317 LCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	11/25/1987 NON COMMERCIAL FACILITY/INSTITUTION SURFACE WATERS	PETROLEUM 1.00 GAL	N	11/25/1987
PILL HISTORY:					
6021030203 707459 OMMANDER OIL	17 STARLIGHT DRIVE NORTHPORT, NY COUNTY:SUFFOLK	12/01/1987 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 2.00 GAL	N	12/02/1987
PILL HISTORY:					
6021030228 707714 NK	LILCO NORTHPORT NORTHPORT, NY COUNTY:SUFFOLK	12/08/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	12/10/1987
PILL HISTORY:					
6021030257 708058 LCO	LOADING PLATFORM NORTHPORT, NY COUNTY:SUFFOLK	12/17/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 0.00 GAL	N	01/08/1988
PILL HISTORY:					
6021030263 708120 ILCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	12/19/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM WASTE OIL 5.00 GAL	N	12/31/1987
PILL HISTORY:					
6021030283 708311 ILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	12/28/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 5.00 GAL	N	12/31/1987
PILL HISTORY:					
6021030382 709269 ILCO	LILCO NORTHPORT NORTHPORT, NY COUNTY:SUFFOLK	02/01/1988 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 50.00 GAL	N	12/31/1988
PILL HISTORY:					
6021030461 709774 LCO	LILCO NORTHPORT POWER PLA NORTHPORT, NY COUNTY:SUFFOLK	02/18/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 200.00 GAL	N	08/29/1988
PILL HISTORY:					
6021030464 709825 ILCO NORTHPORT	WATERSIDE DRIVE NORTHPORT, NY COUNTY:SUFFOLK	02/21/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 1000.00 GAL	N	08/29/1988
PILL HISTORY:					

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36021030606 8710969 LILCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	03/31/1988 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 5.00 GAL	N	04/06/1988
SPILL HISTORY:					
36021042210 8802017 LILCO	WATERSIDE AVE. NORTHPORT, NY COUNTY:SUFFOLK	06/03/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM WASTE OIL 20.00 GAL	N	12/24/1990
SPILL HISTORY:					
36021042221 8803049 LILCO POWER STATION	EATON NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	07/08/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 0.00 GAL	N	10/18/1990
SPILL HISTORY:					
36021042450 8801026 LILCO	EATON NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	05/03/1988 MAJOR OIL FACILITY (>400K) SURFACE WATERS	PETROLEUM 1.00 GAL	N	05/03/1988
SPILL HISTORY:					
36021042461 8801081 LILCO	EAST NECK RD. NORTHPORT, NY COUNTY:SUFFOLK	05/04/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 9.00 GAL	N	07/26/1988
SPILL HISTORY:					
36021042466 8801138 LILCO	EATONS NECK ROAD. NORTHPORT, NY COUNTY:SUFFOLK	05/05/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 1.00 GAL	N	07/26/1988
SPILL HISTORY:					
36021042574 8802218 LILCO	NORTHPORT POWER STATION NORTHPORT, NY COUNTY:SUFFOLK	06/10/1988 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 50.00 GAL	N	11/22/1988
SPILL HISTORY:					
36021042663 8802803 LILCO	POWER ROAD NORTHPORT, NY COUNTY:SUFFOLK	06/28/1988 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 30.00 GAL	N	06/30/1988
SPILL HISTORY:					
36021042718 8803207 LILCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	07/14/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM WASTE OIL 5.00 GAL	N	07/21/1988
SPILL HISTORY:					

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6021042848 804152 SLAND MARINE	WATERSIDE & EATONECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	08/11/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM 10.00 GAL	N	08/12/1988
PILL HISTORY:					
6021042925 804813 ESSEL THEOWNA	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	08/31/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #4 FUEL 0.00 GAL	N	09/07/1988
PILL HISTORY:					
6021042965 805206 ANKER	LILCO OFF SHORE LOADING NORTHPORT, NY COUNTY:SUFFOLK	09/16/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	09/26/1988
PILL HISTORY:					
6021042970 805238 INK	MAKAMAH BEACH NORTHPORT, NY COUNTY:SUFFOLK	09/15/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	09/21/1988
PILL HISTORY:					
6021042999 805492 ILCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	09/28/1988 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM #6 FUEL 5.00 GAL	N	10/12/1988
PILL HISTORY:					
6021043030 805862 ILCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	10/09/1988 TANK TRUCK ON LAND	PETROLEUM #6 FUEL 60.00 GAL	N	10/12/1988
PILL HISTORY:					
6021043126 806712 ILCO	EAST EATON NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	11/10/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN AIR	NON PETRO/NON HAZMAT HEAVY BLACK SMOKE 0.00 GAL	N	11/14/1988
PILL HISTORY:					
6021043199 807278 AGLE & WALSH CONSTRUCTIO	BEACH DRIVE NORTHPORT, NY COUNTY:SUFFOLK	12/04/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	RAW SEWAGE DISCHARGE SEWAGE 100000.00 GAL	N	12/04/1988
PILL HISTORY:					
6021043265 807790 LCO	NORTHPORT POWER STATION NORTHPORT, NY COUNTY:SUFFOLK	12/23/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 1.00 GAL	N	12/29/1988
PILL HISTORY:					

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6021043375 808661 ILCO NORTHPORT POWER STA	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	02/02/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #2 FUEL 15.00 GAL	N	02/21/1989
PILL HISTORY:					
6021043479 809850 ILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	03/22/1989 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM #2 FUEL 1.00 GAL	N	04/14/1989
PILL HISTORY:					
6021043488 809883 ILCO/RGM	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	03/23/1989 TANK TRUCK SURFACE WATERS	PETROLEUM 1.00 GAL	N	04/14/1989
PILL HISTORY:					
6021043595 900743 ILCO	NORTHPORT TERMINAL NORTHPORT, NY COUNTY:SUFFOLK	04/24/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM 1.00 GAL	N	04/26/1989
PILL HISTORY:					
6021043858 902651 ALVIN RESIDENCE	77 ELBERTA DRIVE NORTHPORT, NY COUNTY:SUFFOLK	06/09/1989 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 10.00 GAL	N	06/02/1989
PILL HISTORY:					
6021043898 902856 INK	TUMBER POINT DRIVE NORTHPORT, NY COUNTY:SUFFOLK	06/20/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN AIR	UNKNOWN 0.00 GAL	N	06/21/1989
PILL HISTORY:					
6021044093 904196 INK	NORTHPORT HARBOR NORTHPORT, NY COUNTY:SUFFOLK	07/27/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM GASOLINE 0.00 GAL	N	07/31/1989
PILL HISTORY:					
6021044110 904247 ILCO	NORTHPORT POWER STATION NORTHPORT, NY COUNTY:SUFFOLK	07/28/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 10.00 GAL	N	07/31/1989
PILL HISTORY:					
6021044155 904567 ILCO	HYLAND AVENUE NORTHPORT, NY COUNTY:SUFFOLK	08/04/1989 NON COMMERCIAL FACILITY/INSTITUTION ON LAND	PETROLEUM NON-PCB OIL 1.00 GAL	N	08/10/1989
PILL HISTORY:					

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1021044265 105280 LCO	WATERSIDE ROAD NORTHPORT, NY COUNTY:SUFFOLK	08/28/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 1.00 GAL	N	08/29/1989
SPILL HISTORY:					
1021044423 106344 .CO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	09/28/1989 MAJOR OIL FACILITY (>400K) ON LAND	PETROLEUM #6 FUEL 100.00 GAL	N	10/18/1990
SPILL HISTORY:					
1021044474 106703 .CO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	10/07/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 20.00 GAL	N	10/12/1989
SPILL HISTORY:					
1021044597 107756 NK	TOWN LINE ROAD NORTHPORT, NY COUNTY:SUFFOLK	11/04/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN AIR	UNKNOWN 0.00 GAL	N	11/05/1989
SPILL HISTORY:					
1021044627 107986 LCO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	11/11/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #6 FUEL 5.00 GAL	N	11/17/1989
SPILL HISTORY:					
1021044667 108267 LCO	LONG ISLAND SOUND NORTHPORT, NY COUNTY:SUFFOLK	11/19/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM NON-PCB OIL 1.00 GAL	N	11/20/1989
SPILL HISTORY:					
1021044861 109437 .CO	UNDER LONG ISLAND SOUND NORTHPORT, NY COUNTY:SUFFOLK	12/29/1989 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM NON-PCB OIL 108.00 GAL	N	02/06/1990
SPILL HISTORY:					
1021057840 00073 .CO	EATONS NECK RD/WATERSIDE NORTHPORT, NY COUNTY:SUFFOLK	04/03/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM GASOLINE 2.00 GAL	N	05/10/1990
SPILL HISTORY:					
1021058118 01924 IK	MIDDLEVILLE ROAD NORTHPORT, NY COUNTY:SUFFOLK	05/18/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM GASOLINE 50.00 GAL	N	07/31/1990
SPILL HISTORY:					

ERIIS ID SPILL NO. SPILL NAME	SPILL LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
16021058572 1004639 RELIANCE	546 ELWOOD ROAD NORTHPORT, NY COUNTY:SUFFOLK	07/26/1990 TANK TRUCK ON LAND	PETROLEUM #2 FUEL 10.00 GAL	N	07/27/1990
SPILL HISTORY:					
16021058603 1004838 UNK	SOUTH OF HOBART BEACH NORTHPORT, NY COUNTY:SUFFOLK	07/31/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	RAW SEWAGE DISCHARGE RAW SEWAGE 0.00 GAL	N	08/01/1990
SPILL HISTORY:					
16021058749 1005814 UNK	19 BAUSE STREET NORTHPORT, NY COUNTY:SUFFOLK	08/26/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	RAW SEWAGE DISCHARGE HUMAN WASTE 0.00 GAL	N	08/27/1990
SPILL HISTORY:					
16021059258 1009424 TYREE BROTHERS	EATON NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	11/29/1990 TANK TRUCK ON LAND	PETROLEUM NON-PCB OIL 75.00 GAL	N	12/12/1990
SPILL HISTORY:					
16021059343 1010068 ILCO	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	12/16/1990 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #4 FUEL 8.00 GAL	N	12/18/1990
SPILL HISTORY:					
16021059533 1011325 ILCO	NORTHPORT POWER PLANT NORTHPORT, NY COUNTY:SUFFOLK	01/26/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 25.00 GAL	N	03/04/1991
SPILL HISTORY:					
16021059638 1011995 ILCO	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	02/17/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 50.00 GAL	N	02/19/1991
SPILL HISTORY:					
16021059688 012356 MR HUGHES RESIDENCE	550 FOURTH STREET NORTHPORT, NY COUNTY:SUFFOLK	03/01/1991 SELF SPILLER ON LAND	PETROLEUM #2 FUEL 3.00 GAL	N	03/04/1991
SPILL HISTORY:					
16021059695 012382 VEI-SHAU-HU VESSEL	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	03/02/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM #2 FUEL 10.00 GAL	N	03/04/1991
SPILL HISTORY:					

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021059705 12405 I-SHAU-HU VESSEL	NORTHPORT POWER STATION NORTHPORT, NY COUNTY:SUFFOLK	03/03/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM 0.00 GAL	N	03/04/1991
LL HISTORY:					
021059773 12870 CO	NORTHPORT POWER STATION NORTHPORT, NY COUNTY:SUFFOLK	03/17/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM #6 FUEL 100.00 GAL	N	04/02/1991
LL HISTORY:					
021059783 12899 CO	EATONS NECK ROAD NORTHPORT, NY COUNTY:SUFFOLK	03/18/1991 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE IN SEWER (FUMES)	PETROLEUM WASTE OIL 2.00 GAL	N	03/19/1991
LL HISTORY:					
021069029 14291 CO	WATERSIDE AVENUE NORTHPORT, NY COUNTY:SUFFOLK	03/28/1993 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	PETROLEUM WASTE OIL 1.00 GAL	N	03/29/1993
LL HISTORY:					
021028723 01983 ID	NY COUNTY:SUFFOLK	/ / COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00	N	08/18/1987
LL HISTORY:					
021028725 02419 ID	NY COUNTY:SUFFOLK	/ / COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00	N	07/17/1986
LL HISTORY:					
021028727 02804 ID	NY COUNTY:SUFFOLK	/ / COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00	N	05/07/1987
LL HISTORY:					
021028731 04598 ID SEE 86-4597	NY COUNTY:SUFFOLK	/ / COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00	N	11/17/1986
LL HISTORY:					
021028858 06310 ID	NY COUNTY:SUFFOLK	/ / COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00	N	01/13/1987
LL HISTORY:					

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RIIS ID PILL NO. PILL NAME	SPILL LOCATION	SPILL DATE SPILL SOURCE NATURAL RESOURCE AFFECTED	MATERIAL CLASS MATERIAL TYPE QUANTITY SPILLED	EMERGENCY RESPONSE (Y/N)	CLEANUP COMPLETION DATE
8021029189 100603	NY COUNTY:SUFFOLK	/ / COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	UNKNOWN 0.00	N	01/31/1986
PILL HISTORY:					
8021029623 701696 NK	ROBERT MOSES CAUSEWAY NY COUNTY:SUFFOLK	05/31/1987 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM 0.00 GAL	N	06/01/1987
PILL HISTORY:					
8021030431 401564	NY COUNTY:SUFFOLK	09/01/1984 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE GROUNDWATER	UNKNOWN 0.00	N	11/07/1984
PILL HISTORY:					
8021030432 401635	NY COUNTY:SUFFOLK	09/19/1984 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE SURFACE WATERS	UNKNOWN 0.00	N	09/03/1985
PILL HISTORY:					
8021042440 800939 NK	FIELD 10 AT JONES BEACH NY COUNTY:SUFFOLK	04/29/1988 COMMERCIAL FACILITY-NO PETROLEUM FOR SALE ON LAND	PETROLEUM DIESEL 0.00	N	06/16/1988
PILL HISTORY:					
8021068471 302008	NY COUNTY:SUFFOLK	/ /	0.00	N	/ /
PILL HISTORY:					

FINDS DESCRIPTION

AIRS (Aerometric Information Retrieval System) - The AIRS system contains detailed information pertaining to over 85,000 sites which submit air emissions reports. Developed under the Clean Air Act, this database also maintains data on compliance status and enforcement actions.

CERCLIS (Comprehensive Environmental Cleanup Liability Information System) - This system contains information on over 38,000 sites that have been identified as hazardous, or potentially hazardous, and may require cleanup. Information included in this database is provided by both state and federal sources.

CICIS (Chemicals in Commerce Information System) - The CICIS database is responsible for the tracking of hazardous chemicals that are listed in the Toxic Substances Control Act (TSCA). Data elements include the manufacturer's name and address, CAS registry number, chemical prefaced name, and any possible synonyms.

CONTR LIST (Contractor List) - The CONTR LIST is an inventory of companies that are barred from conducting business with the EPA due to violations of environmental laws or statutes.

CRIMDOCK (Criminal Docket System) - The CRIMDOCK is a comprehensive automated system for tracking criminal enforcement actions. CRIMDOCK handles data for all environmental statutes and tracks enforcement actions from the initial stages of investigation through conclusion.

CUS (Chemical Update System) - CUS is used to track facilities which manufacture or import specific toxic chemicals in excess of 10,000 pounds per year.

DOCKET - A national system containing all pertinent information regarding a civil or administrative enforcement action taken by the EPA, or state agency, against violators of environmental laws or statutes.

FATES (FIFRA and TSCA Enforcement System) - The FATES database contains records of FIFRA and TSCA inspections and enforcement proceedings, registration data for pesticide producing establishments and annual pesticide production reports, state grant-in-aid program and accomplishment data, and program and financial status of TSCA inspection contracts.

FTTS (FIFRA and TSCA Tracking System) - The FTTS system contains information regarding Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA) legislation. This database also contains selected data concerning pesticide producers.

ERIS

SANBORN FIRE INSURANCE MAP SEARCH

PERTAINING TO: NORTHWEST CORNER
PULASKI AND ELWOOD
EAST NORTHPOINT, NY

REPORT NUMBER: 38967

No Sanborn Maps were found for this site in the ERIIS Collection, for the period covering the years 1867-1990

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

D001 -- A solid waste that exhibits the characteristic of ignitability, but is not listed as a hazardous waste in Subpart D.

D002 -- A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in Subpart D.

D003 -- A solid waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste in Subpart D.

EPA HW #	CAS #	COMMON CHEMICAL NAME
D004	7740-38-2	ARSENIC
D005	7740-39-3	BARIUM
D006	7440-43-9	CADMIUM
D007	7440-47-3	CHROMIUM
D008	7439-92-1	LEAD
D009	7439-97-6	MERCURY
D010	7782-49-2	SELENIUM
D011	7440-22-4	SILVER
D012	72-20-8	ENDRIN
D013	58-89-9	LINDANE
D014	72-43-5	METHOXYCHLOR
D015	8001-35-2	TOXAPHENE
D016	94-75-7	2,4-D
D017	93-72-1	2,4,5-TP(SILVEX)
D018	71-39-2	BENZENE
D019	56-23-5	CARBON TETRACHLORIDE
D020	57-74-9	CHLORDANE
D021	108-90-7	CHLOROBENZENE
D022	67-66-3	CHLOROFORM
D023	95-48-7	O-CRESOL
D024	108-39-4	M-CRESOL
D025	106-44-5	P-CRESOL
D026		CRESOL
D027	106-46-7	1,4-DICHLOROBENZENE
D028	107-06-2	1,2-DICHLOROETHANE
D029	75-35-4	1,1-DICHLOROETHYLENE
D030	121-14-2	2,4-DINITROTOLUENE
D031	76-44-8	HEPTACHLOR (AND ITS EPOXIDE)
D032	118-74-1	HEXACHLOROBENZENE
D033	87-68-3	HEXACHLOROBUTADIENE
D034	67-72-1	HEXACHLOROETHANE
D035	78-93-3	METHYL ETHYL KETONE
D036	98-95-3	NITROBENZENE
D037	87-86-5	PENTACHLOROPHENOL
D038	110-86-1	PYRIDINE
D039	127-18-4	TETRACHLOROETHYLENE
D040	79-01-6	TRICHLOROETHYLENE
D041	95-95-4	2,4,5-TRICHLOROPHENOL
D042	88-06-2	2,4,6-TRICHLOROPHENOL
D043	75-01-4	VINYL CHLORIDE

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

F009 -- Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.

F010 -- Quenching bath residue from oil baths from metal heat treating operations where cyanides are used in the process.

F011 -- Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.

F012 -- Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.

F019 -- Wastewater treatment sludges from the chemical conversion coating of aluminum.

F020 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)

F021 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.

F022 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.

F023 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5- trichlorophenol.)

F024 -- Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent dessicants, wastewater, wastewater treatment sludges, spend catalysts, and wastes listed in §261.32.)

F026 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.

F027 -- Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

K024 -- Distillation bottoms from the production of phthalic anhydride from naphthalene.

K025 -- Distillation bottoms from the production of nitrobenxene by the nitration of benzene.

K026 -- Stripping still tails from the production of methyl ethyl pyridines.

K027 -- Centrifuge and distillation residues from toluene diisocyanate production.

K028 -- Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.

K029 -- Wastes from the product steam stripper in the production of 1,1,1-trichloroethane.

K030 -- Column bottoms or heavy ends from the combined production of trichloroethtlene and perchloroethtlene.

K031 -- By-product salts generated in the production of MSMA and cacodylic acid.

K032 -- Wastewater treatment sludge from the production of chlordane.

K033 -- Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.

K034 -- Filter solids from the filtration of hexachlorocyclopentadiene in the prodution of chlordane.

K035 -- Wastewater treatment sludges generated in the production of creosote.

K036 -- Still bottoms from toluene reclamation distillation in the production of disulfoton.

K037 -- Wastewater treatment sludges from the production of disulfoton,

K038 -- Wastewater from the washing and stripping of phorate production.

K039 -- Filter cake from the filtration of diethylphosphorodithioic acid in the productionof phorate.

K040 -- Wastewater treatment sludge from the production of phorate.

K041 -- Wastewater treatment sludge from the production of toxaphene.

K071 -- Brine purification muds from the mercury cell process in chlorine production, where separatelty prepurified brine is not used.

K073 -- Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.

K083 -- Distillation bottoms from aniline production.

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
F027	88-06-2	2,4,6-TRICHLOROPHENOL
F027	58-90-2	2,3,4,6-TETRACHLOROPHENOL
F027	95-95-4	2,4,5-TRICHLOROPHENOL
F027	87-86-5	PENTACHLOROPHENOL
F027	93-76-5	2,4,5-TRICHLOROPHENOXYACETIC ACID
F027	93-72-1	SILVEX
P002	591-08-28	1-ACETYL-2-THIOUREA
P003	107-02-88	ACROLEIN
P001	81-81-2	WARFARIN
P004	309-00-28	ALDRIN
P005	107-18-68	ALLYL ALCOHOL
P006	20859-73-8	ALUMINUM PHOSPHIDE
P007	2763-96-4	MUSCIMOL
P008	504-24-58	PYRIDINE, 4-AMINO
P010	7778-39-4	ARSENIC ACID
P011	1303-28-2	ARSENIC PENTOXIDE, SOLID
P012	1327-53-3	ARSENIC TRIOXIDE, SOLID
P013	542-62-18	BARIUM CYANIDE, SOLID
P014	108-98-58	PHENYL MERCAPTAN
P015	7440-41-7	BERYLLIUM
P016	542-88-18	BIS(CHLOROMETHYL)ETHER
P017	598-31-28	BROMOACETONE
P018	357-57-38	BRUCINE
P020	88-85-7	DINOSEB
P021	592-01-88	CALCIUM CYANIDE, SOLID
P022	75-15-0	CARBON DISULFIDE
P023	107-20-08	CHLOROACETALDEHYDE
P024	106-47-88	P-CHLOROANILINE
P026	5344-82-1	1-(0-CHLOROPHENYL) THIOUREA
P027	542-76-78	3-CHLOROPROPIONITRILE
P028	100-44-78	BENZYL CHLORIDE
P029	544-92-38	CUPROUS CYANIDE
P030	57-12-5	CYANIDES (SOLUBLE SALTS AND COMPLEXES)
P031	460-19-58	CYANOGEN
P033	506-77-48	CYANOGEN CHLORIDE, INHIBITED
P034	131-89-58	4,6-DINITRO-0-CYCLOHEXYLPHENOL
P036	696-28-68	DICHLOROPHENYLARSINE
P037	60-57-1	DIELDRIN
P038	692-42-28	DIETHYLARSINE
P039	298-04-48	DISULFOTON
P040	297-97-28	THIONAZIN
P041	311-45-58	DIETHYL P-NITROPHENYL PHOSPHATE
P042	51-43-4	EPINEPHRINE
P043	55-91-4	ISOFLUROPHATE
P044	60-51-5	DIMETHOATE
P045	39196-18-4	THIOFANOX
P046	122-09-88	ALPHA, ALPHA-DIMETHYLPHENETHYLAMINE
P047	534-52-18	DINITRO-ORTHO-CRESOL

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

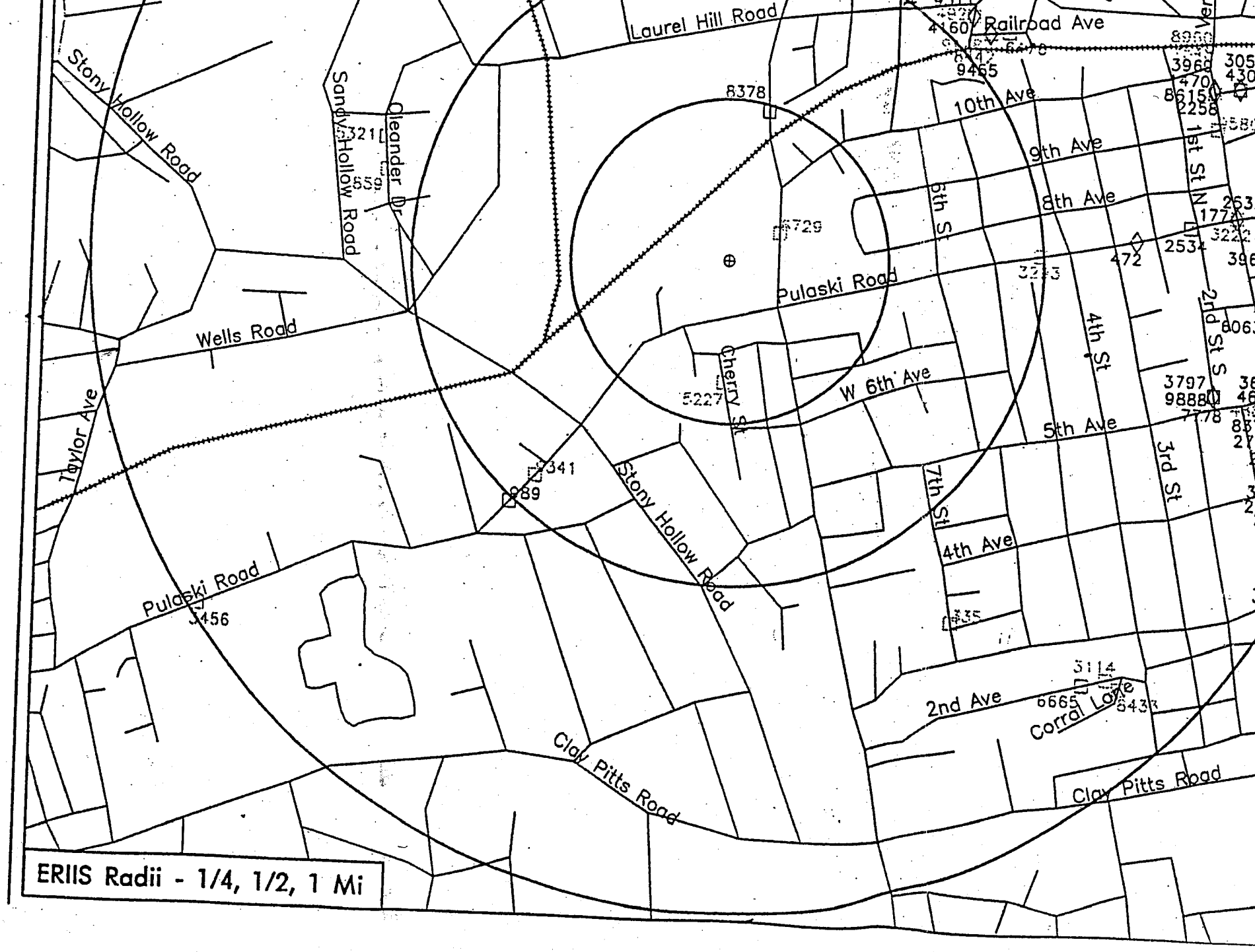
EPA HW #	CAS #	COMMON CHEMICAL NAME
U182	123-63-78	PARALDEHYDE
U183	608-93-58	PENTACHLOROBENZENE
U184	76-01-7	PENTACHLOROETHANE
U185	82-68-8	PENTACHLORONITROBENZENE
U186	504-60-98	1,3-PENTADIENE
U187	62-44-2	PHENACETIN
U188	108-95-28	PHENOL
U189	1314-80-3	PHOSPHOROUS PENTASULFIDE
U190	85-44-9	PHTHALIC ANHYDRIDE
U191	109-06-88	2-PICOLINE
U192	23950-58-5	PRONAMIDE
U193	1120-71-4	PROPANE SULTONE
U194	107-10-88	PROPYLAMINE
U196	110-86-18	PYRIDINE
U197	106-51-48	QUINONE
U200	50-55-5	RESERPINE
U201	108-46-38	RESORCINOL
U202	81-07-2	SACCHARIN
U203	94-59-7	SAFROLE
U204	7783-00-8	SELENIOUS ACID
U205	7488-56-4	SELENIUM DISULFIDE
U206	18883-66-4	STREPTOZOTOCIN
U207	95-94-3	1,2,4,5-TETRACHLOROBENZENE
U208	630-20-68	1,1,1,2-TETRACHLOROETHANE
U209	79-34-5	1,1,2,2-TETRACHLOROETHANE
U210	127-18-48	TETRACHLOROETHYLENE
U211	56-23-5	CARBON TETRACHLORIDE
U212	58-90-2	2,3,4,6-TETRACHLOROPHENOL
U213	109-99-98	TETRAHYDROFURAN
U214	563-68-88	THALLIUM ACETATE
U215	6533-73-9	THALLOUS CARBONATE
U216	7791-12-0	THALLIUM CHLORIDE
U217	10102-45-1	THALLIUM NITRATE
U218	62-55-5	THIOACETAMIDE
U219	62-56-6	THIOUREA
U220	108-88-38	TOLUENE
U221	25376-45-8	TOLUENEDIAMINE
U222	636-21-58	O-TOLUIDINE HYDROCHLORIDE
U223	26471-62-5	TOLUENE DIISOCYANATE (MIXED ISOMERS)
U225	75-25-2	BROMOFORM
U226	71-55-6	METHYL CHLOROFORM
U227	79-00-5	1,1,2-TRICHLOROETHANE
U228	79-01-6	TRICHLOROETHYLENE
U230	88-06-2	2,4,6-TRICHLOROPHENOL
U232	93-76-5	2,4,5-T ACID
U233	93-72-1	SILVEX (2,4,5-TP)
U234	99-35-4	1,3,5-TRINITROBENZENE

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
P106	143-33-98	SODIUM CYANIDE (NA(CN))
P108	57-24-9	STRYCHNINE
P109	3689-24-5	SULFOTEP
P110	78-00-2	TETRAETHYL LEAD
P111	107-49-38	TETRAETHYL PYROPHOSPHATE
P112	509-14-88	TETRANITROMETHANE
P113	1314-32-5	THALLIC OXIDE
P114	12039-52-0	SELENIOUS ACID, DITHALLIUM(1 +) SALT
P115	7446-18-6	THALLOUS SULFATE
P116	79-19-6	THIOSEMICARBAZIDE
P119	7803-55-6	AMMONIUM METAVANADATE
P120	1314-62-1	VANADIUM PENTOXIDE
P121	557-21-18	ZINC CYANIDE
P122	1314-84-7	ZINC PHOSPHIDE
P123	8001-35-2	TOXAPHENE
U001	75-07-0	ACETALDEHYDE
U002	67-64-1	ACETONE
U003	75-05-8	ACETONITRILE
U004	98-86-2	ACETOPHENONE
U005	53-96-3	2-ACETYLAMINOFLUORENE
U006	75-36-5	ACETYL CHLORIDE
U007	79-06-1	ACRYLAMIDE
U008	79-10-7	ACRYLIC ACID
U009	107-13-18	ACRYLONITRILE, INHIBITED
U010	50-07-7	MITOMYCIN C
U011	61-82-5	AMITROLE
U012	62-53-3	ANILINE
U014	492-80-88	C.I. SOLVENT YELLOW 34
U015	115-02-68	AZASERINE
U016	225-51-48	BENZ[C]ACRIDINE
U017	98-87-3	BENZAL CHLORIDE
U018	56-55-3	BENZ[A]ANTHRACENE
U019	71-43-2	BENZENE
U020	98-09-9	BENZENESULFONYL CHLORIDE
U021	92-87-5	BENZIDINE
U022	50-32-8	BENZO[A]PYRENE
U023	98-07-7	BENZOIC TRICHLORIDE
U024	111-91-18	BIS(2-CHLOROETHOXY)METHANE
U025	111-44-48	2,2'-DICHLOROETHYL ETHER
U026	494-03-18	CHLORNAPHAZINE
U027	108-60-18	BIS(2-CHLOROISOPROPYL)ETHER
U028	117-81-78	DI-(2-ETHYLHEXYL)PHTHALATE
U029	74-83-9	METHYL BROMIDE
U030	101-55-38	4-BROMOPHENYL PHENYL ETHER
U031	71-36-3	N-BUTYL ALCOHOL
U032	13765-19-0	CALCIUM CHROMATE
U033	353-50-48	CARBONIC DIFLUORIDE
U034	75-87-6	ACETALDEHYDE, TRICHLORO-

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
U085	1464-53-5	2,2-BIOXIRANE
U086	1615-80-1	1,2-DIETHYLHYDRAZINE
U087	3288-58-2	0,0-DIETHYL S-METHYL DITHIOPHOSPHATE
U088	84-66-2	DIETHYL PHTHALATE
U089	56-53-1	DIETHYLSTILBESTROL
U090	94-58-6	DIHYDROSAFROLE
U091	119-90-48	3,3'-DIMETHOXYBENZIDINE
U092	124-40-38	DIMETHYLAMINE, ANHYDROUS
U093	60-11-7	4-DIMETHYLAMINOAZOBENZENE
U094	57-97-6	7,12-DIMETHYLBENZ(A)ANTHRACENE
U095	119-93-78	3,3'-DIMETHYLBENZIDINE
U096	80-15-9	CUMENE HYDROPEROXIDE
U097	79-44-7	DIMETHYLCARBAMOYL CHLORIDE
U099	540-73-88	1,2-DIMETHYLHYDRAZINE
U101	105-67-98	2,4-XYLENOL
U102	131-11-38	DIMETHYL PHTHALATE
U103	77-78-1	DIMETHYL SULFATE
U105	121-14-28	2,4-DINITROTOLUENE
U106	606-20-28	2,6-DINITROTOLUENE
U107	117-84-08	DIOCTYL PHTHALATE
U108	123-91-18	1,4-DIOXANE
U109	122-66-78	1,2-DIPHENYLHYDRAZINE
U110	142-84-78	DIPROPYLAMINE
U111	621-64-78	N-NITROSODI-N-PROPYLAMINE
U112	141-78-68	ETHYL ACETATE
U113	140-88-58	ETHYL ACRYLATE
U114	111-54-68	ETHYLENEBIS(DITHIOCARBAMIC ACID)
U115	75-21-8	ETHYLENE OXIDE
U116	96-45-7	ETHYLENE THIOUREA
U117	60-29-7	ETHYL ETHER
U118	97-63-2	ETHYL METHACRYLATE
U119	62-50-0	ETHYL METHANESULFONATE
U120	206-44-08	FLUORANTHENE
U121	75-69-4	FLUOROTRICHLOROMETHANE
U122	50-00-0	FORMALDEHYDE GAS
U123	64-18-6	FORMIC ACID
U124	110-00-98	FURAN
U125	98-01-1	FURFURAL
U126	765-34-48	GLYCIDALDEHYDE
U127	118-74-18	HEXACHLOROBENZENE
U128	87-68-3	HEXACHLOROBUTADIENE
U129	58-89-9	LINDANE
U130	77-47-4	HEXACHLOROCYCLOPENTADIENE
U131	67-72-1	HEXACHLOROETHANE
U132	70-30-4	HEXACHLOROPHENE
U133	302-01-28	HYDRAZINE, ANHYDROUS


Laurel Hill Road
Railroad Ave
Stony Hollow Road
Sandy Hollow Road
Oleander Dr
10th Ave
9th Ave
8th Ave
6th St
1st St N
Pulaski Road
Wells Road
Cherry St
W 6th Ave
5th Ave
4th St
2nd St S
3rd St
7th St
4th Ave
Taylor Ave
Stony Hollow Road
Pulaski Road
2nd Ave
Corral Lane
Clay Pitts Road
Clay Pitts Road
ERIIS Radii - 1/4, 1/2, 1 Mi

APPENDIX C

FIGURES

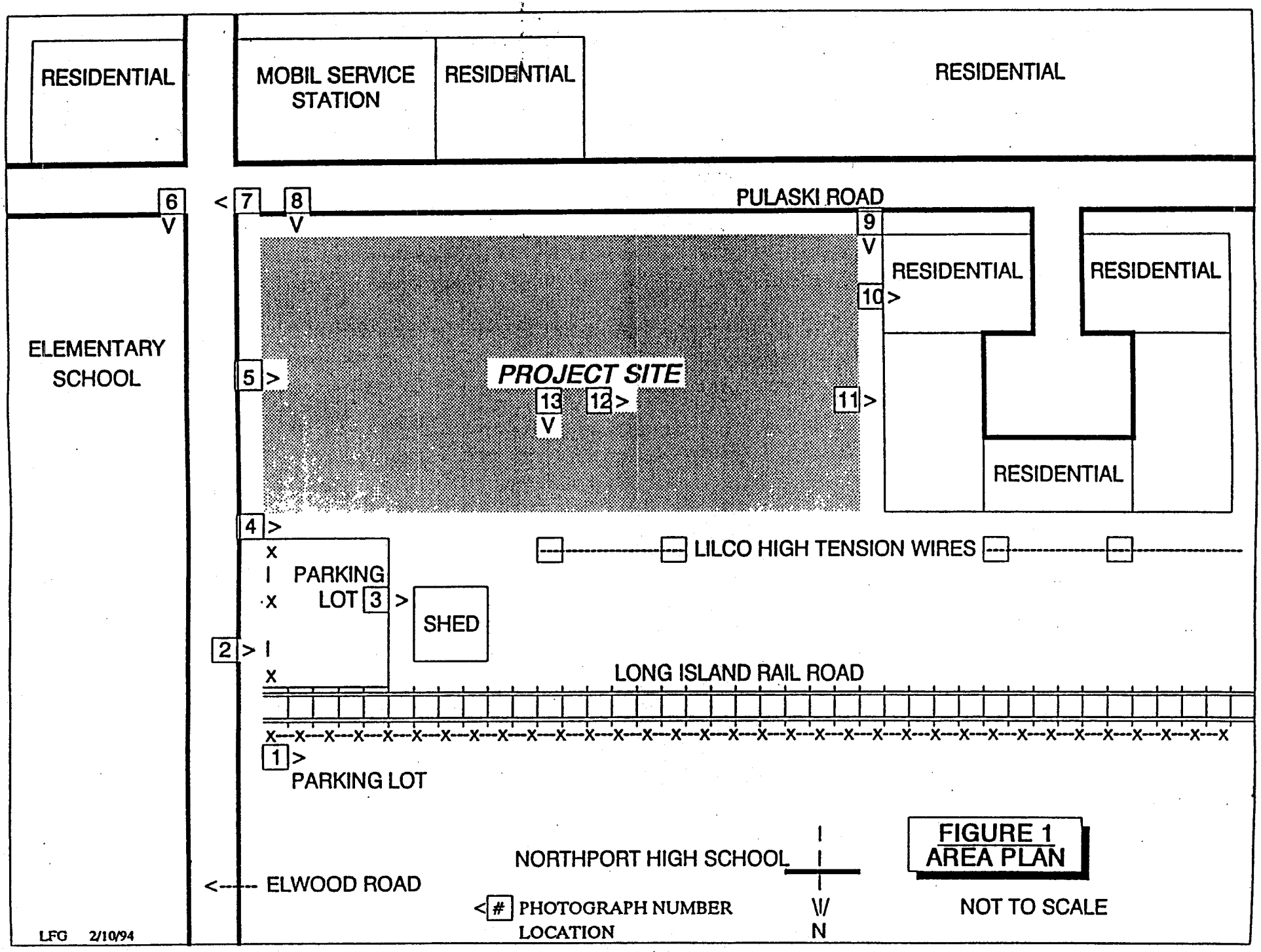
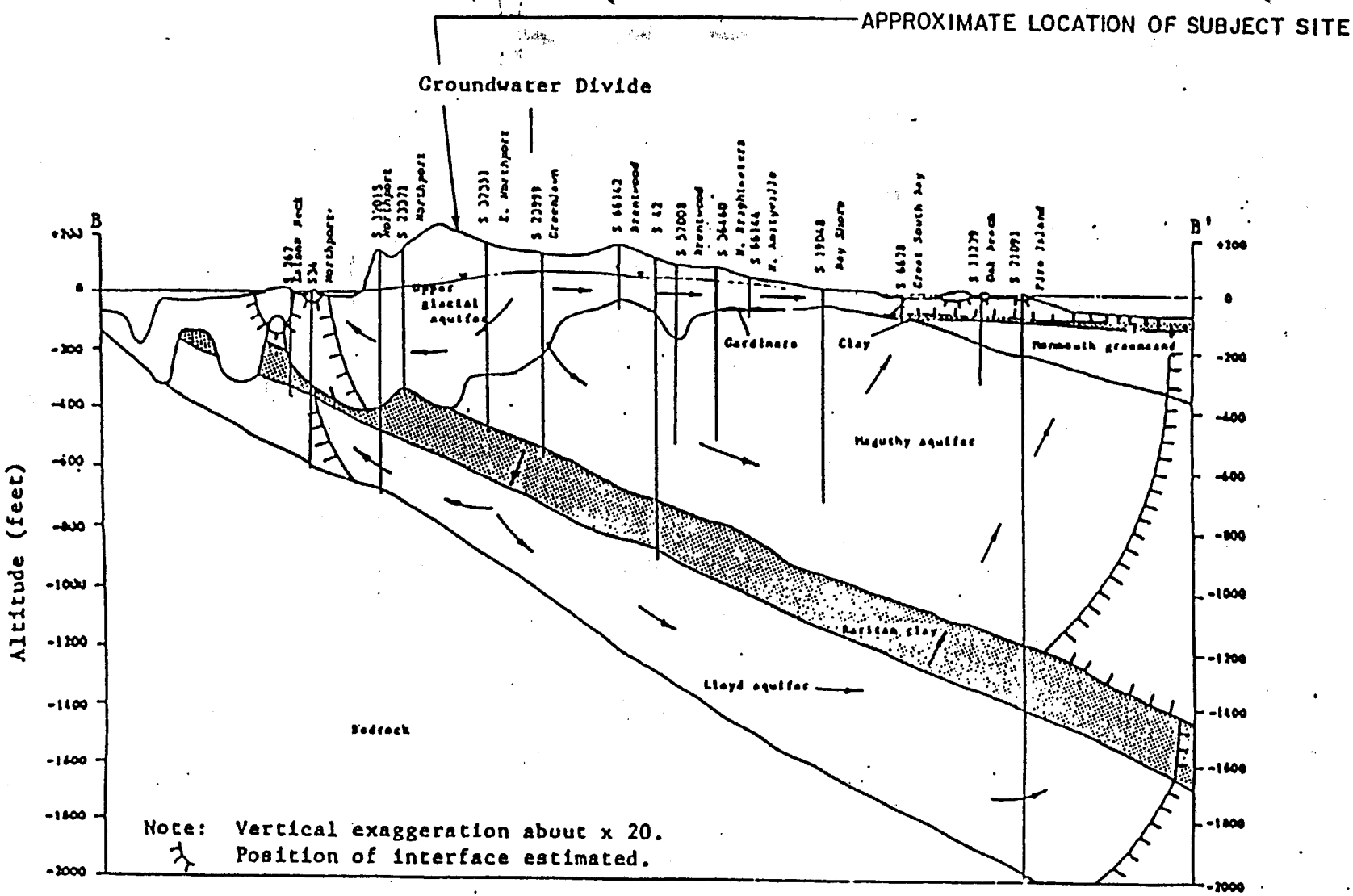


FIGURE 1
AREA PLAN



OBTAINED FROM SUFFOLK COUNTY COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN.

Bienstock, Lucchesi & Associates, P.C.
CONSULTING ENGINEERS
134 BROADWAY • AMITYVILLE, NEW YORK 11701-2704

PHASE I ENVIRONMENTAL SITE ASSESSMENT

FIGURE 2

HYDROGEOLOGIC CROSS SECTION

System	Series	Geologic unit	Hydrogeologic unit	Thickness (ft)	Geologic Description
Quaternary	present Holocene 12,000 yrs	Recent shore, beach, and salt-marsh deposits	Upper glacial aquifer	0-60	Sand, gravel, clay, silt, organic mud, peat, loam, and shells. Colors: gray, brown, green, black, and yellow. Recent artificial-fill deposits of gravel, sand, clay, and rubbish.
	Pleistocene	Moraine deposits Glaciofluvial deposits Smithtown clay (informal usage)		0-700	Till composed of clay, sand, gravel and boulders; forms Harbor Hill and Ronkonkoma terminal moraines. Outwash deposits consist of quartzose sand, fine to very coarse, and gravel, pebble to boulder sized. Glaciolacustrine deposits (Smithtown clay) consist of silt, clay, and some sand and gravel layers. Colors are mainly gray, brown, and yellow. Contains shells and plant remains generally in finer grained beds.
		Unconformity			
		Gardiners Clay	Gardiners Clay	0-75	Marine deposits of clay and silt with some interbedded sand and gravel. Color, greenish-gray and gray. Foraminifera and lignite present, and also locally glauconite.
		Unconformity			
		post-Cretaceous(?) deposits	Upper glacial aquifer	0-140	Sand, fine to coarse. Color is brown. Identified as a distinct unit only on South Fork to date.
	200,000 yrs	Unconformity			
Cretaceous	60 mil yrs	Monmouth Group	Monmouth greensand	0-200	Interbedded marine deposits of clay, silt, and sand. Color, dark greenish-gray to black. Contains much glauconite and lignite.
		Unconformity			
	Upper Cretaceous	Magothy Formation – Matawan Group undifferentiated	Magothy aquifer	0-1000	Sand, fine to coarse, clayey in part; interbedded with lenses and layers of light- to dark-gray clay. Most 100-200 feet is generally composed of coarse sand and gravel beds. Sand and gravel are quartzose. Lignite and pyrite are common. Colors are gray, white, red, brown, and yellow.
		Disconformity?			
		Raritan Formation — clay member	Raritan confing unit	0-150	Clay, solid and silty; few lenses and layers of sandy little gravel. Lignite and pyrite common. Colors are gray, red, and white, commonly variegated.
		Disconformity			
		Raritan Formation — Lloyd Sand Member	Lloyd aquifer	0-150	Sand, fine to coarse, and gravel with interstratified beds and lenses of light- to dark-gray clay, silt, clayey and silty sand and some lignite and pyrite. Locally has gradational contact with overlying Raritan clay. Colors are yellow, gray, and white; clay is red locally.
	100 mil yrs	Unconformity			
Early Paleozoic to Precambrian(?)	400 mil yrs >550 mil yrs (?)	Bedrock	Bedrock	not known	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. Surface of bedrock is commonly highly weathered to a greenish-white residual clay.

OBTAINED FROM SUFFOLK COUNTY COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN.

FIGURE 3

SUFFOLK COUNTY STRATIGRAPHY & HYDROGEOLOGIC UNITS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

91 CARLETON AVE., CENTRAL ISLIP, N.Y.

Blumbach, Lucchesi & Associates, P.C.
CONSULTING ENGINEERS
134 BROADWAY • AMITYVILLE, NEW YORK 11701-2704

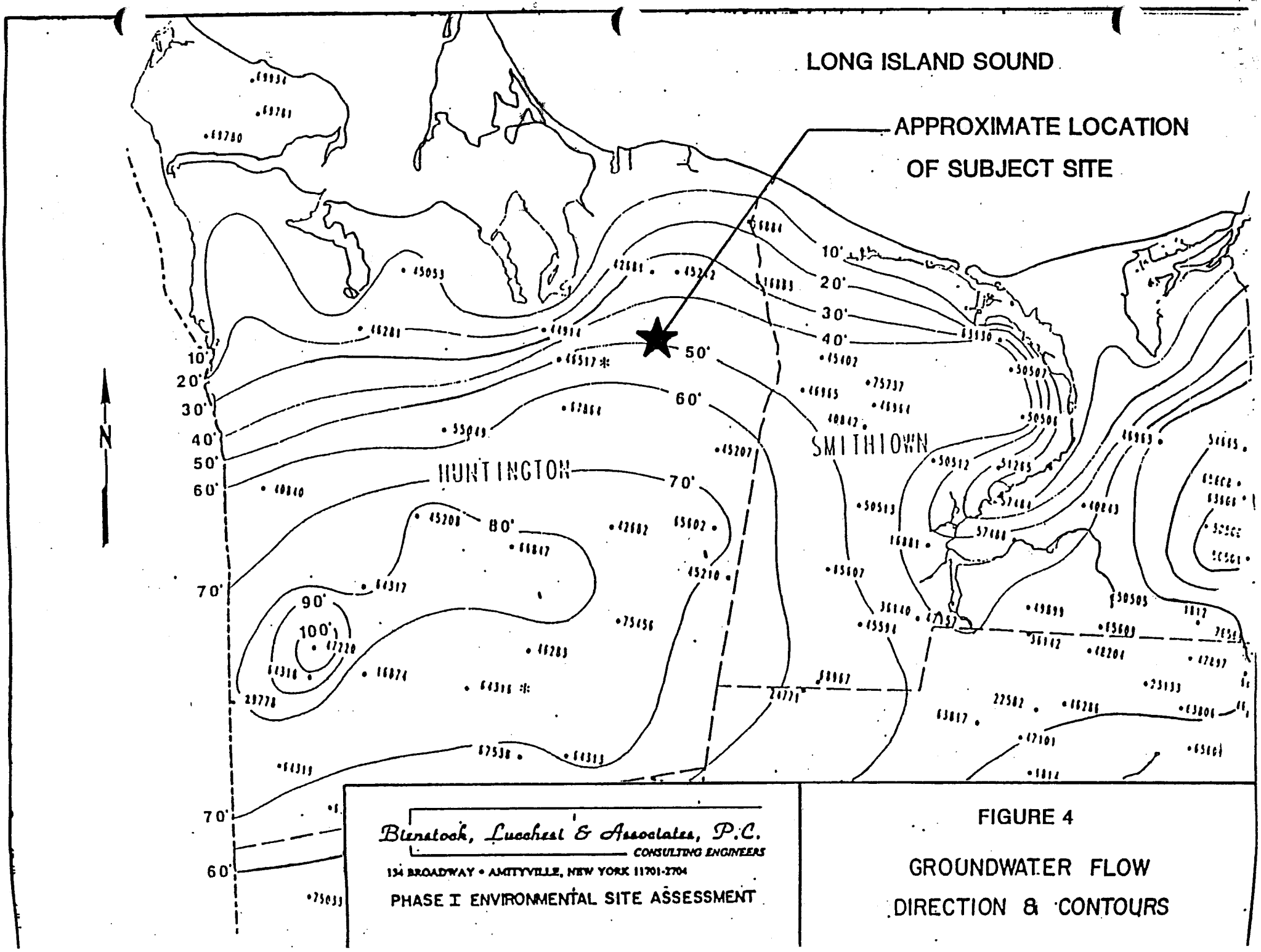


FIGURE 4

GROUNDWATER FLOW
DIRECTION & CONTOURS

New York State Department of
Environmental Conservation

Spill Incidents Database Search

More information:

Environmental Remediation Databases
Glossary of Spills Database Terms

More searches:
New Spill Incidents Search

Other Links of Interest...

Spill Record

Administrative Information

DEC Region: 1
Spill Number: 8600750

Spill Date/Time

Spill Date: 04/30/1986 **Spill Time:** 03:30 PM
Call Received Date: 04/30/1986 **Call Received Time:** 04:15 PM

Location

Spill Name:
Address: PULASKI ROAD & LAKE ROAD
City: GREENLAWN **County:** Suffolk

Spill Description

Material Spilled:
WASTE OIL

Amount Spilled:
0 Gal.

Cause: Tank Test Failure

Source: Other Comm/Industrial
Resource Affected: Groundwater
Waterbody:

Record Close

Region Close Date: 07/12/1989

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Other Links of Interest

Information about the Spill Response and Remediation Program
Phone Numbers for Spill Response and Remediation

New York State Department of
Environmental Conservation

Spill Incidents Database Search

More information:

Environmental Remediation Databases
Glossary of Spills Database Terms

More searches:
New Spill Incidents Search

Other Links of Interest...

Spill Record

Administrative Information

DEC Region: 1
Spill Number: 8709398

Spill Date/Time

Spill Date: 02/04/1988 **Spill Time:** 11:00 AM
Call Received Date: 02/04/1988 **Call Received Time:** 11:27 AM

Location

Spill Name: LILCO
Address: PULASKI ROAD
City: GREENLAWN **County:** Suffolk

Spill Description

Material Spilled:
NON PCB OIL

Amount Spilled:
3 Gal.

Cause: Equipment Failure

Source: Unknown
Resource Affected: On Land
Waterbody:

Record Close

Region Close Date: 02/09/1988

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Other Links of Interest

Information about the Spill Response and Remediation Program
Phone Numbers for Spill Response and Remediation

New York State Department of
Environmental Conservation

Spill Incidents Database Search

More information:

Environmental Remediation Databases
Glossary of Spills Database Terms

More searches:
New Spill Incidents Search

Other Links of Interest...

Spill Record

Administrative Information

DEC Region: 1
Spill Number: 8810042

Spill Date/Time

Spill Date: 03/28/1989 **Spill Time:** 07:00 PM
Call Received Date: 03/28/1989 **Call Received Time:** 07:17 PM

Location

Spill Name: LILCO
Address: PULASKI ROAD
City: GREENLAWN **County:** Suffolk

Spill Description

Material Spilled:
NON PCB OIL

Amount Spilled:
90 Gal.

Cause: Equipment Failure

Source: Other Comm/Industrial
Resource Affected: On Land
Waterbody:

Record Close

Region Close Date: 12/02/1991

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Other Links of Interest

Information about the Spill Response and Remediation Program
Phone Numbers for Spill Response and Remediation

New York State Department of
Environmental Conservation

Spill Incidents Database Search

More information:

Environmental Remediation Databases
Glossary of Spills Database Terms

More searches:
New Spill Incidents Search

Other Links of Interest...

Spill Record

Administrative Information

DEC Region: 1
Spill Number: 9003538

Spill Date/Time

Spill Date: 06/27/1990 **Spill Time:** 03:00 PM
Call Received Date: 06/27/1990 **Call Received Time:** 03:27 PM

Location

Spill Name: LILCO
Address: PULASKI RD & LAKE ROAD
City: GREENLAWN **County:** Suffolk

Spill Description

Material Spilled:
GASOLINE

Amount Spilled:
0 Gal.

Cause: Tank Test Failure

Source: Other Comm/Industrial
Resource Affected: Groundwater
Waterbody:

Record Close

Region Close Date: 07/19/1990

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Other Links of Interest

Information about the Spill Response and Remediation Program
Phone Numbers for Spill Response and Remediation

New York State Department of
Environmental Conservation

Spill Incidents Database Search

More information:

Environmental Remediation Databases
Glossary of Spills Database Terms

More searches:
New Spill Incidents Search

Other Links of Interest...

Spill Record

Administrative Information

DEC Region: 1
Spill Number: 9007807

Spill Date/Time

Spill Date: 10/17/1990 **Spill Time:** 10:35 AM
Call Received Date: 10/17/1990 **Call Received Time:** 10:50 AM

Location

Spill Name: LILCO
Address: PULASKI RD W/O LAKE RD
City: GREENLAWN **County:** Suffolk

Spill Description

Material Spilled:	Amount Spilled:
NON PCB OIL	10 Gal.
TRANSFORMER OIL	0 Gal.

Cause: Equipment Failure
Source: Other Non Comm/Institutional
Resource Affected: On Land
Waterbody:

Record Close

Region Close Date: 10/18/1990

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Other Links of Interest

Information about the Spill Response and Remediation Program
Phone Numbers for Spill Response and Remediation

New York State Department of
Environmental Conservation

Spill Incidents Database Search

More information:

Environmental Remediation Databases
Glossary of Spills Database Terms

More searches:
New Spill Incidents Search

Other Links of Interest...

Spill Record

Administrative Information

DEC Region: 1
Spill Number: 9010514

Spill Date/Time

Spill Date: 12/28/1990 **Spill Time:** 12:00 PM
Call Received Date: 12/31/1990 **Call Received Time:** 09:00 AM

Location

Spill Name: LILCO
Address: PULASKI RD & LAKE ROAD
City: GREENLAWN **County:** Suffolk

Spill Description

Material Spilled:
GASOLINE

Amount Spilled:
0 Gal.

Cause: Other

Source: Other Comm/Industrial
Resource Affected: Groundwater
Waterbody:

Record Close

Region Close Date: 03/11/1991

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Other Links of Interest

Information about the Spill Response and Remediation Program
Phone Numbers for Spill Response and Remediation

CDM

Memorandum

To: *Housing Help, Inc., c/o Ms. Susan R. Lagville*

From: *Daniel O'Rourke, Mary Anne Taylor, P.E.*

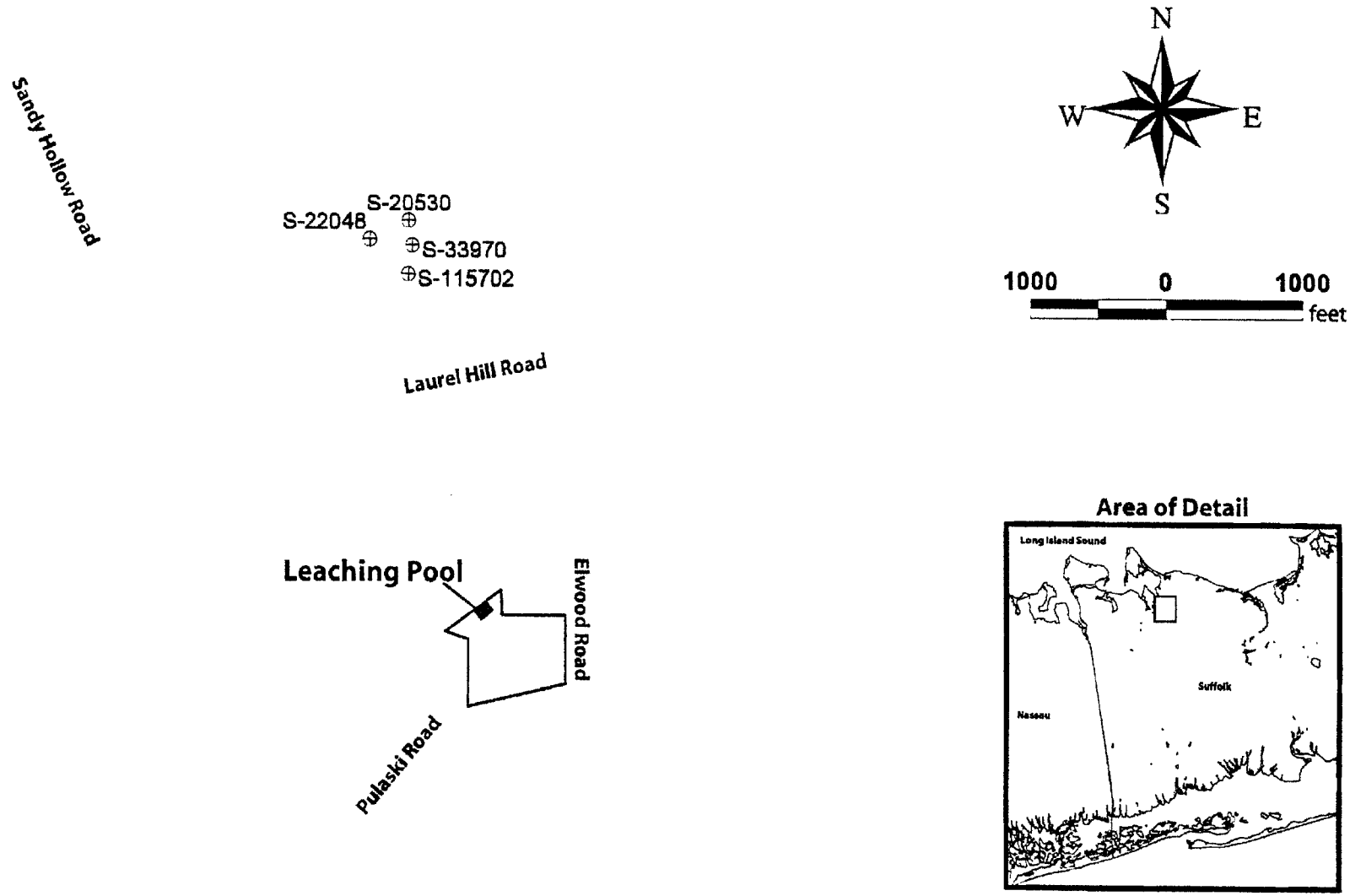
Date: *July 31, 2003*

Subject: *Potential Impact of Treated Sanitary Effluent upon Suffolk County Water Authority's Laurel Hill Road Wellfield*

Introduction

Activities conducted within the area contributing recharge to a public water supply wellfield can have a direct impact on the quality of water withdrawn from the supply wells. The land surface area contributing recharge to a wellfield can be estimated based upon a number of factors, including: well depth, pumping rate, precipitation and recharge rates, aquifer characteristics, water supply pumping at other nearby water supply wells, and hydraulic gradient. This memorandum describes the groundwater flow and contaminant transport modeling conducted to estimate the contributing area for the Suffolk County Water Authority's (SCWA) Laurel Hill Road wellfield in Northport, under projected peak conditions of water supply pumping at the wellfield. The purpose of this project is to determine if the proposed location of a sanitary wastewater effluent recharge area west of Elwood Road and south of the Long Island Rail Road (LIRR) tracks lies within the Laurel Hill Road wellfield's contributing area.

SCWA and the Suffolk County Department of Health Services (SCDHS) have expressed concern that recharging 36,000 gallons per day (gpd) of treated sanitary wastewater effluent at the proposed site may impact water quality at SCWA's Laurel Hill Road wellfield in Northport (Figure 1; Table 1). As the first step in evaluating any potential impacts that the effluent recharge basin could have on the wellfield, the land surface area contributing recharge to the Laurel Hill Road wellfield was estimated, based upon the regional Suffolk County groundwater flow model previously developed in cooperation with SCDHS and SCWA.



CDM

Housing Help, Inc.

Laurel Hill Road Wellfield - Simulation of Potential Impact from Recharge Location Map

Figure 1

Table 1
Suffolk County Water Authority's Laurel Hill Road Wellfield – Holbrook

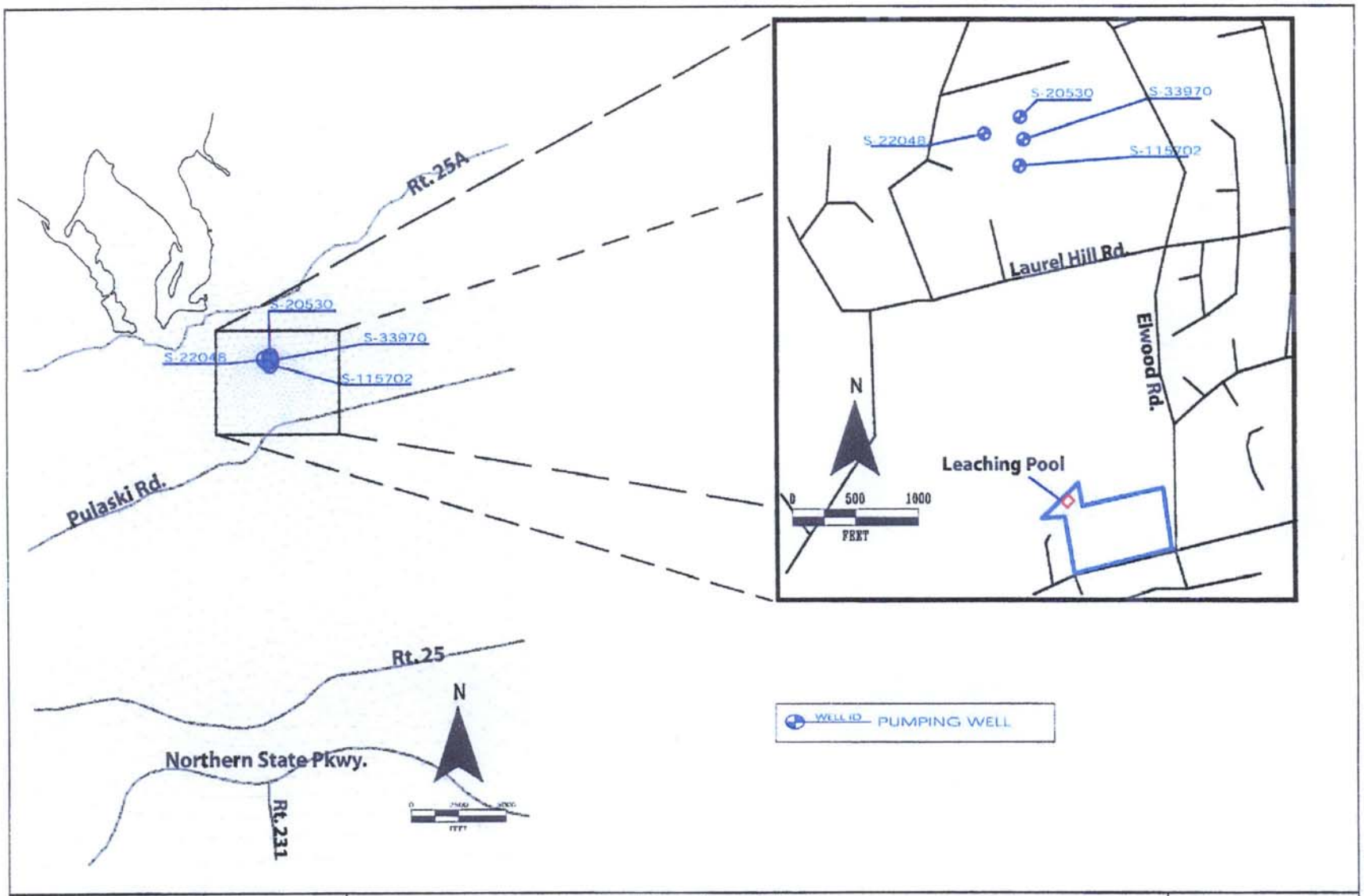
NYSDEC Well Number	SCWA Well Number	Top of Screen (ft, MSL)	Bottom of Screen (ft, MSL)	Capacity (gpm)
S-20530	1	-254.8	-332.5	1200
S-22048	2	-235.6	-314.9	1200
S-33970	3	-230.5	-294.5	1200
S-115702	4	-263.0	-323.0	1300

Model Development

The existing Suffolk County regional groundwater model has a node spacing of approximately 4,000 feet near the Laurel Hill Road wellfield. In order to estimate the contributing area with greater precision, a subregional model with much finer discretization was developed.

The hydrogeologic framework, hydrogeologic properties, boundary conditions, recharge rates, and water supply rates assigned for the Suffolk County groundwater model have been interpolated onto a subregional grid with much finer discretization (Figure 2). The subregional grid has a total of 1,768 nodes, and spacing between individual nodes ranges from less than 100 feet at the Laurel Hill Road wellfield and proposed recharge area, to approximately 1,300 feet along the perimeter of the grid.

The highly discretized model's continued ability to represent aquifer conditions at the site was checked by comparing model-simulated water levels with water levels observed at monitoring wells within the study area. The model was run under 1994 pumping and recharge conditions and the output was compared to the calibrated Suffolk County regional model (calibrated using 1994 conditions). Water table contours for both the regional and subregional models are shown on Figure 3. As shown on the figure, water table contours calculated using the subregional model are very similar to those calculated using the regional model. Also shown on the figure are several monitoring wells within the study area. The difference between the model simulated water level and the water level measured by SCDHS (March, 1994; SCDHS) is noted on the figure beneath each observation well identification number. Laurel Hill Road well number 4 (S-115702) is not shown on the figure, as it had not yet been installed in 1994.



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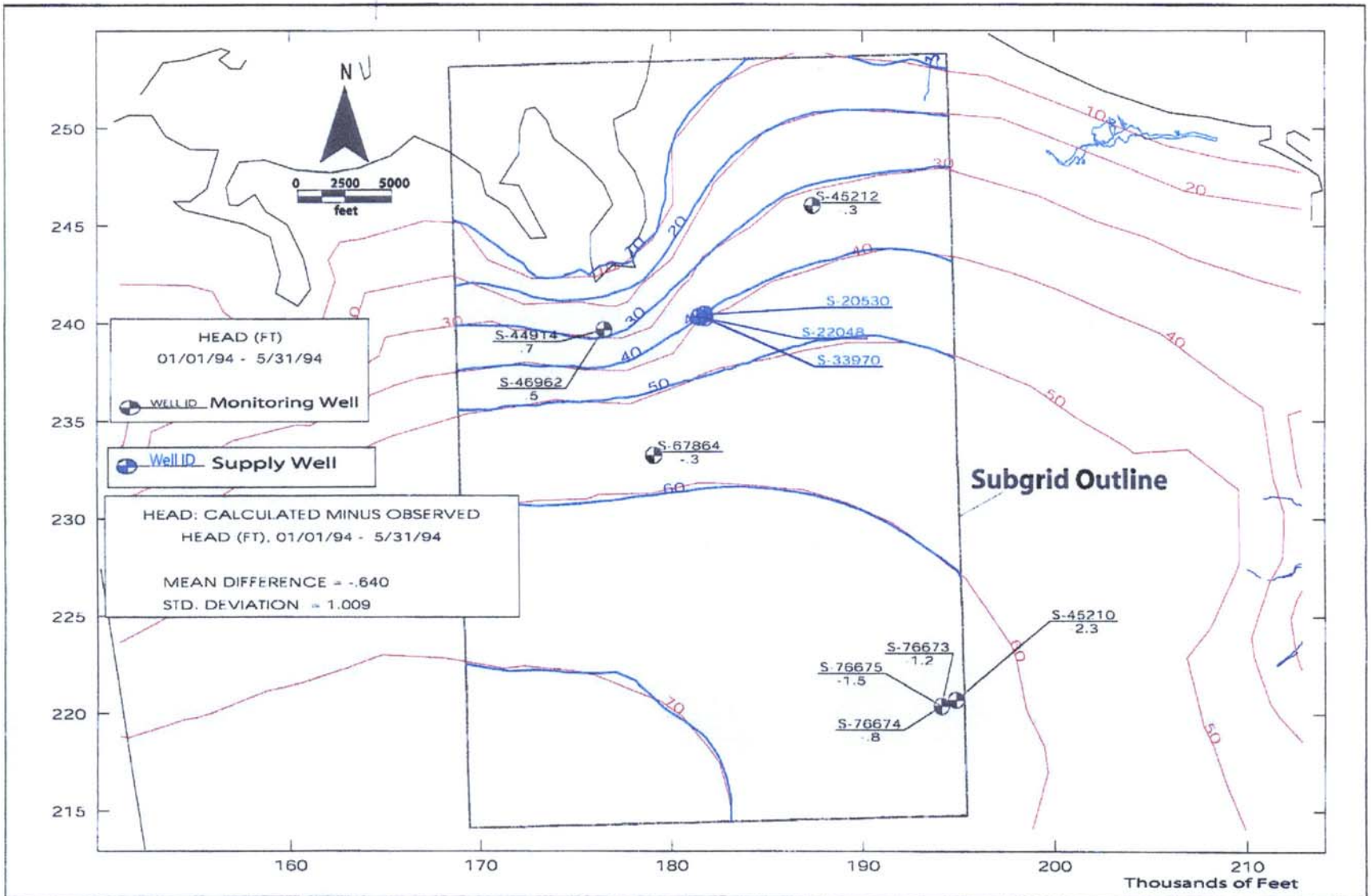
Housing Help, Inc.

Laurel Hill Road Wellfield - Simulation of Potential Impact from Recharge

Finite Element Grid

Figure 2



CDM

Housing Help, Inc.

Water Table Comparison between Subregional and Calibrated Regional Model
Blue = Subregional; Red = Suffolk County Regional Groundwater Model

Figure 3

Area Contributing Recharge to the Laurel Hill Road Wellfield

The subregional model was used to simulate the steady-state flow field using long term average conditions of precipitation and recharge and average annual water supply pumping rates at supply wells nearby to the Laurel Hill Road wellfield. Water supply pumping rates at Laurel Hill Road wellfield were simulated at one half the capacity of each well (Table 2). Recharge to the aquifer was calculated from precipitation measurements recorded at Brookhaven National Laboratory (BNL). In addition to precipitation, approximately 85 percent of the water withdrawn from public supply wells was returned to the aquifer system as recharge from on-site wastewater disposal systems. A northwest-southeast cross-section through the Laurel Hill Road wellfield is shown on Figure 4.

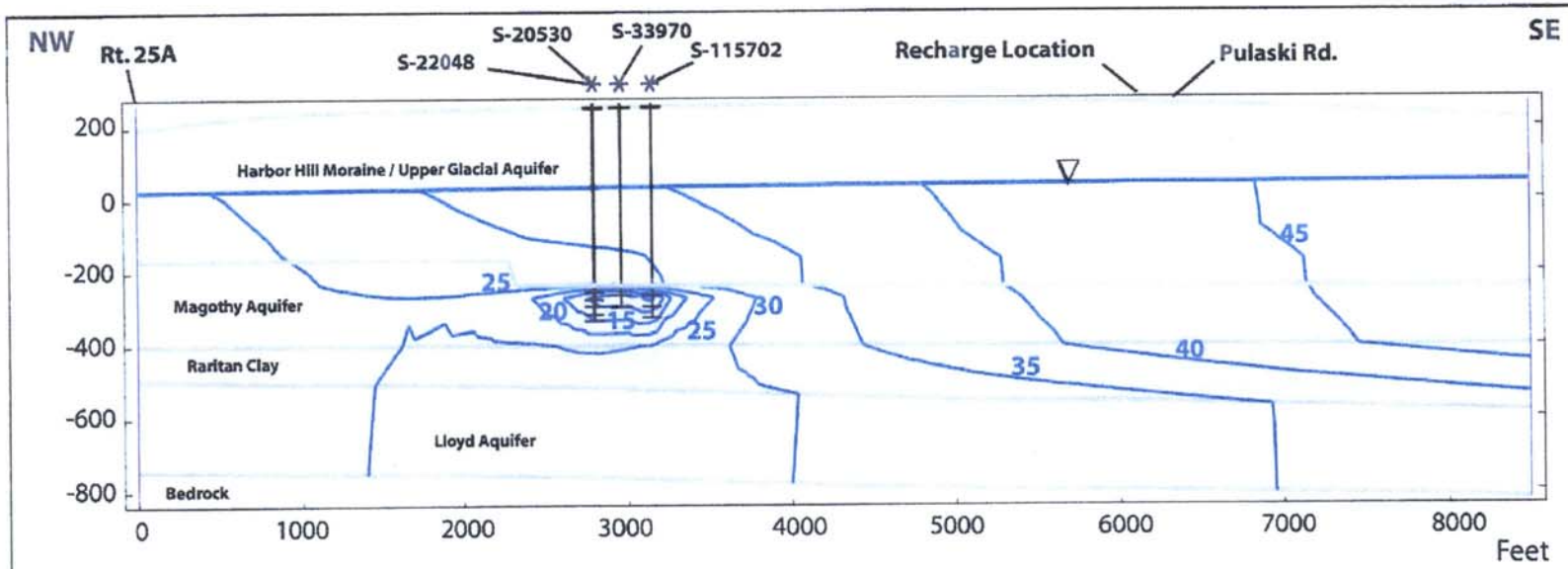
Table 2
Pumping Rates at Laurel Hill Road Wellfield[1]

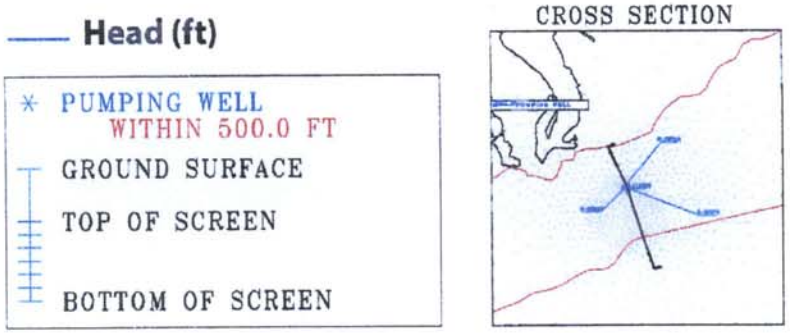
NYSDEC Well Number	Pumping Rate (gpd)
S-20530	864,000
S-22048	864,000
S-33970	864,000
S-115702	936,000

[1] As provided by Freudenthal and Elkowitz Consulting Group, Inc.

DYNTRACK, CDM's contaminant transport model, used the simulated flow field to estimate the land surface area contributing recharge to the Laurel Hill Road wellfield (not including recharge of effluent at the proposed site). The results of this baseline simulation (with Laurel Hill Road wellfield at ½ capacity) are shown on Figure 5. As shown on the figure, the south eastern corner of the housing development property falls within the wellfield's contributing area, however, the location of the proposed recharge basin is outside of the contributing area at this pumping rate. Minimum time of travel from the water table to the Laurel Hill Road wellfield is 7.92 years.

A second simulation was run in which 36,000 gallons per day (gpd) were recharged to the ground surface at the proposed recharge location. Recharge was assigned uniformly over the recharge area of 11,616 ft^2. Again, ½ capacity was used to simulate pumping at the Laurel Hill Road wellfield, while long-term average pumping rates were used for nearby supply wells. Contaminant transport modeling of the recharged effluent was conducted to simulate the migration of the effluent plume. Particles representing sanitary effluent were introduced to the water table at the recharge basin location, and a steady-state simulation tracking the migration of the hypothetical plume of treated sanitary recharge was run for 50 years. The resulting plume is shown in plan view on Figure 6 and in cross section on Figure 7. Figure 6

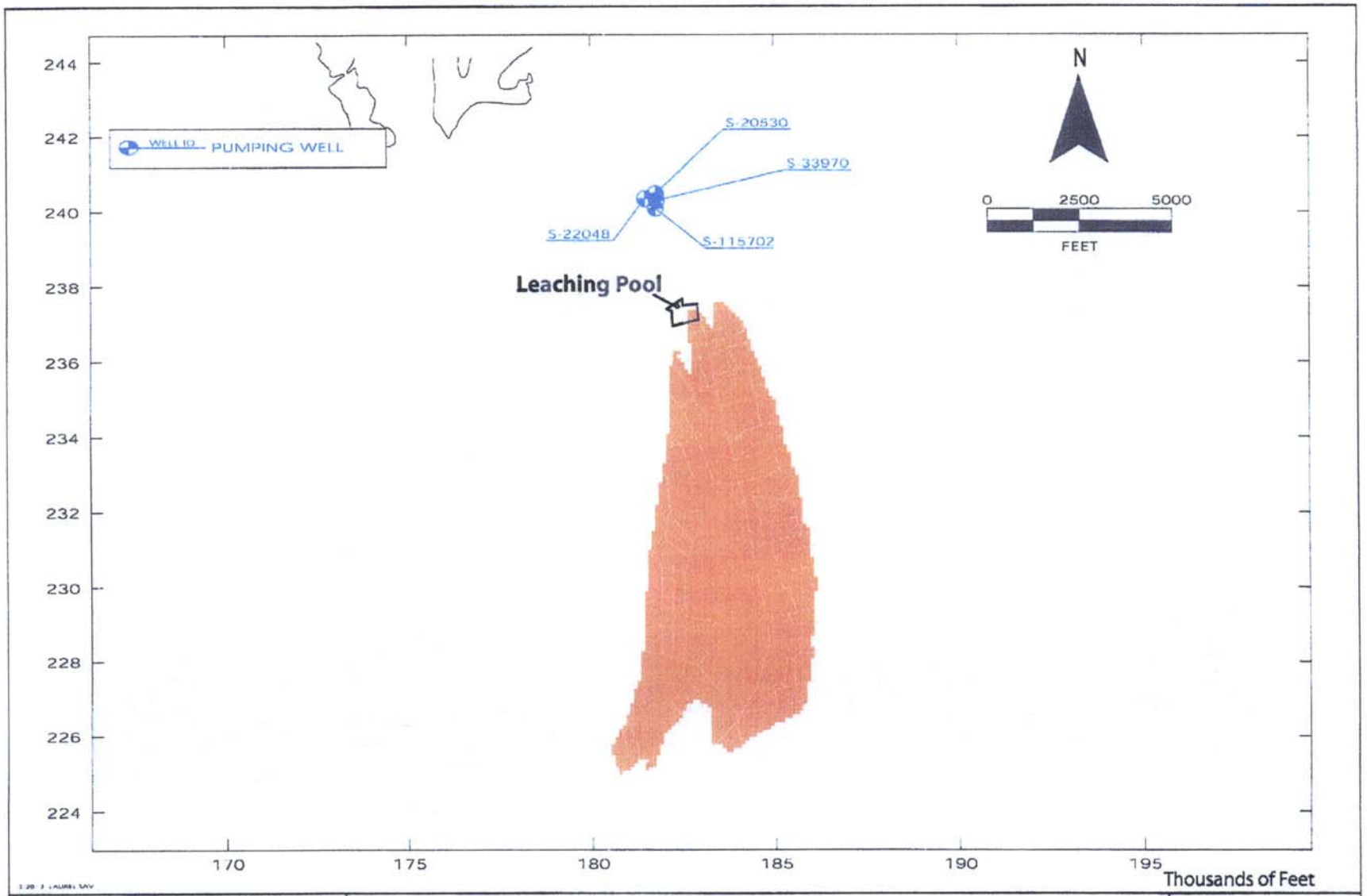




CDM

Housing Help, Inc.
Laurel Hill Road Wellfield - Simulation of Potential Impact from Recharge
NW-SE Cross Section

Figure 4

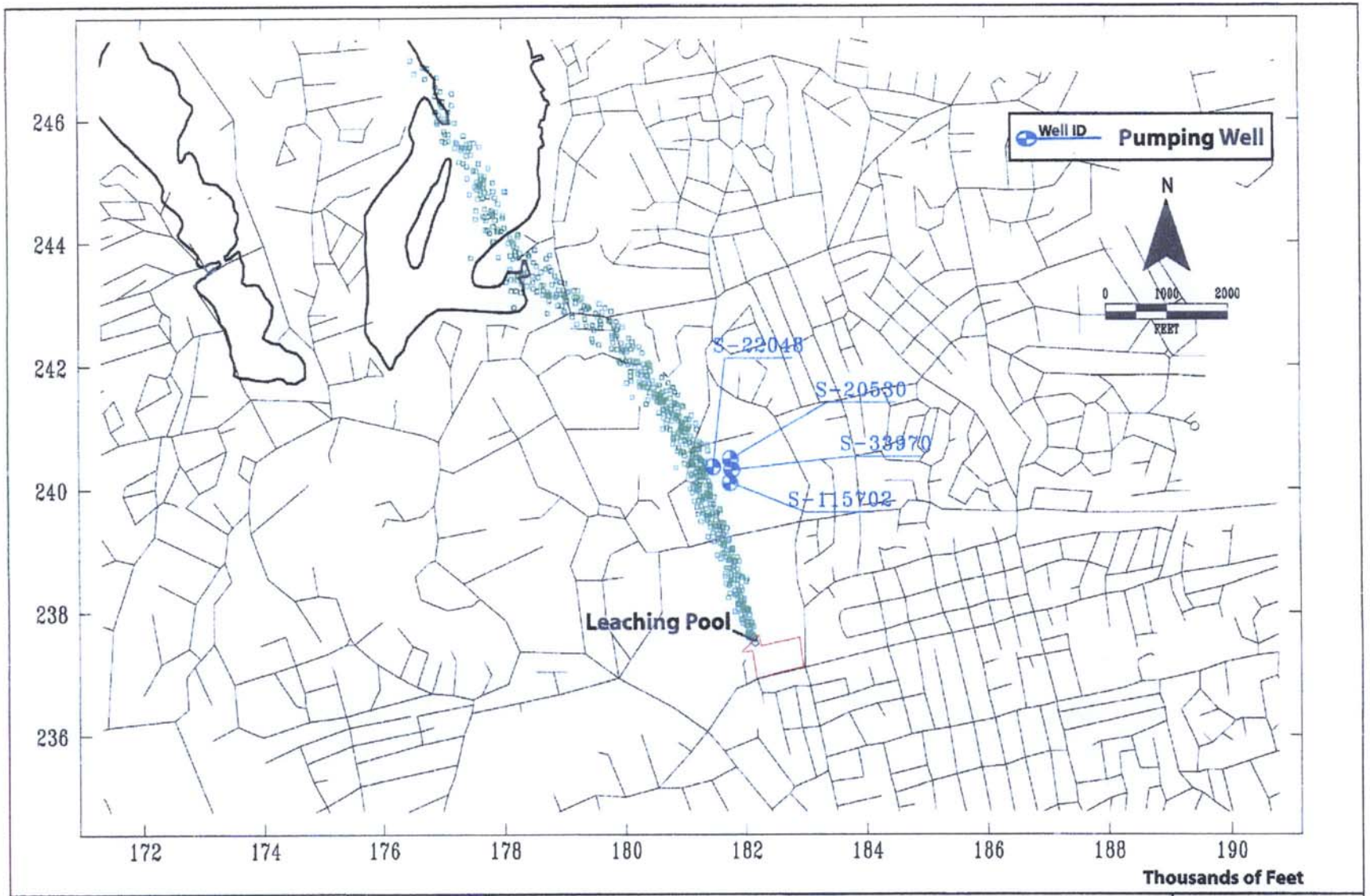


CDM

Housing Help, Inc.

100-Year Contributing Area to Laurel Hill Road Wellfield (1/2 Capacity)

Figure 5

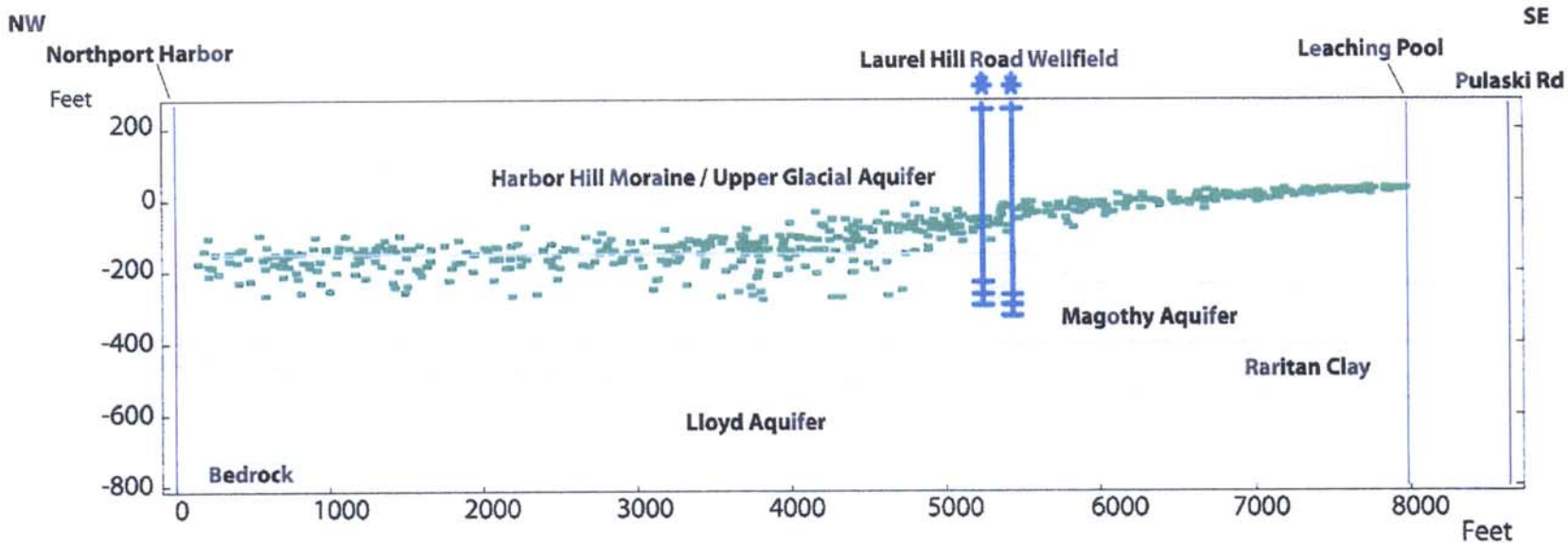


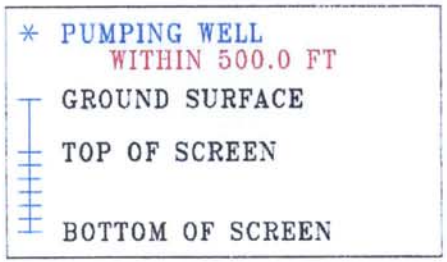
CDM

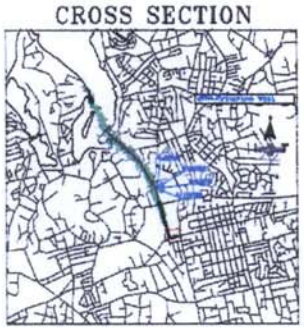
Housing Help, Inc.

Simulated Migration of Recharge Effluent (50 years)

Figure 6



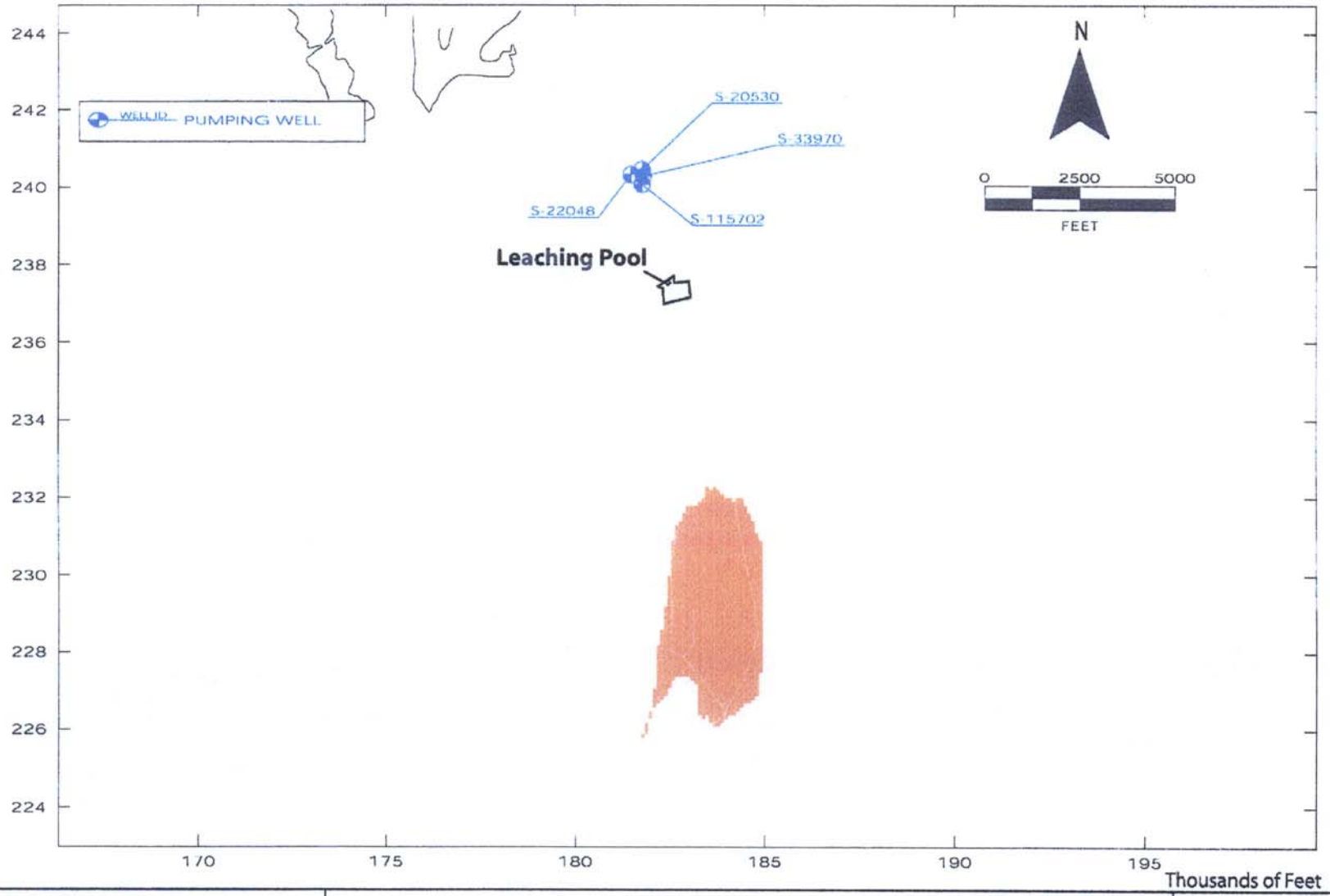




CDM

Housing Help, Inc.
Laurel Hill Road Wellfield - Simulated Migration of Recharge Effluent
Laurel Hill Road Wellfield Pumping at 1/2 Capacity

Figure 7



CDM

Housing Help, Inc.

100-Year Contributing Area to Laurel Hill Road Wellfield (Average Pumping)

Figure 8

shows that the recharged effluent flows northwest, bypassing Laurel Hill Road wellfield, and discharging into Northport Harbor. With the Laurel Hill Road wellfield pumping at ½ capacity, the effluent plume travels primarily within the upper glacial aquifer, well above the screened interval of the Laurel Hill Road wellfield wells, but reaches the upper portions of the Magothy aquifer as the plume travels further north as shown on Figure 7.

A third simulation was conducted using average pumping rates at the Laurel Hill Road wellfield. Pumping rates corresponded with those used in the New York State Source Water Assessment Program (SWAP). Pumping rates are shown in Table 3 and the resulting contributing area is shown on Figure 8. As shown on the figure, the contributing area to the wellfield is considerably smaller and is approximately 5,000 feet south of the recharge location. The minimum time of travel to the wellfield is 19.59 years. The recharge effluent again travels northwest, but remains entirely in the upper glacial aquifer (Figure 9).

Table 3
Average Pumping Rates at the Laurel Hill Road Wellfield

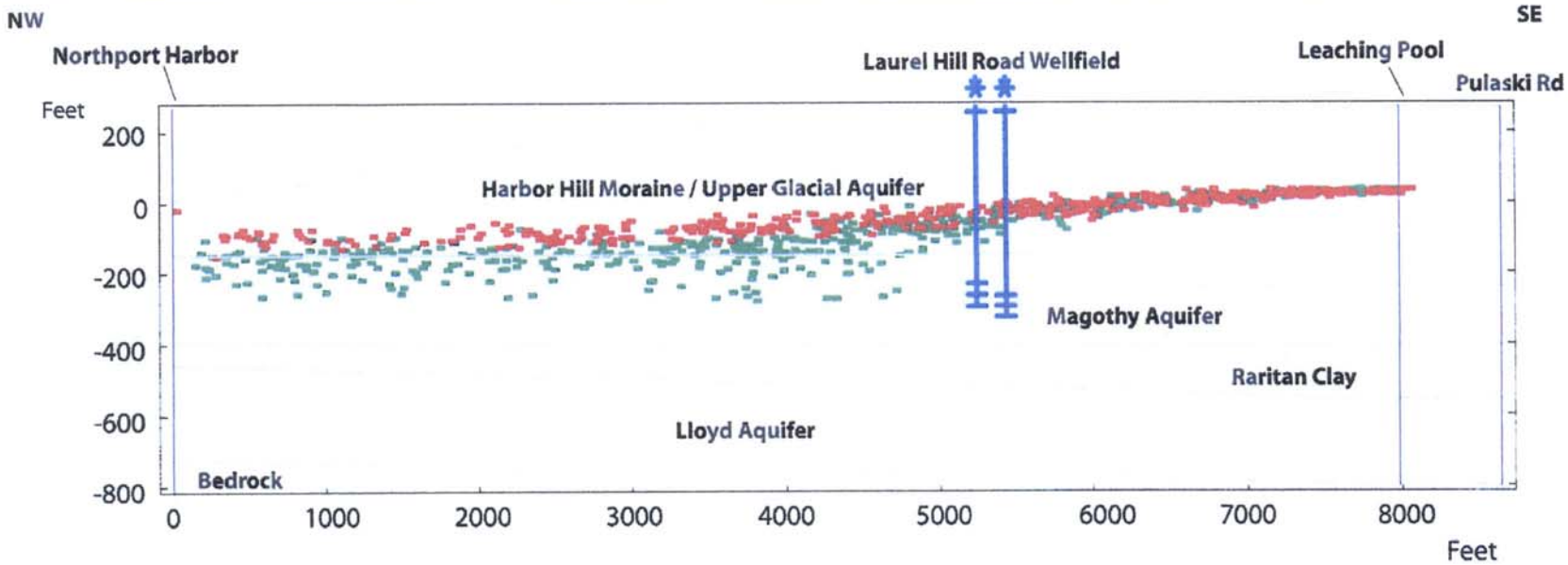
NYSDEC Well Number	Pumping Rate (gpd)
S-20530	313,471
S-22048	318,926
S-33970	319,070
S-115702	371,926

Conclusions

The area estimated to contribute recharge to the Laurel Hill Road wellfield is very sensitive to water supply pumping rates at the wellfield. The results of this analysis are summarized below.

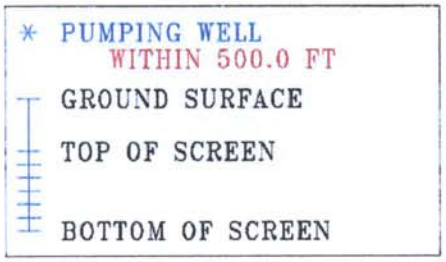
- Under assumed peak conditions of water supply pumping (1/2 capacity) at SCWA's Laurel Hill Road wellfield, the wellfield's contributing area includes southeast corner of the housing development, but the recharge basin lies outside the contributing area, just to the northwest. The additional 36,000 gpd of recharge added at the new recharge area has little effect on the capture zone area of the Laurel Hill Road well filed.

- Contaminant migration analyses show that the hypothetical plume of treated sanitary effluent will not impact the Laurel Hill Road wellfield at peak water supply pumping rates. The plume travels in a northwesterly direction, eventually discharging into



Particle Migration under Average Pumping Conditions

Particle Migration - Pumping = 1/2 Capacity



CROSS SECTION

CDM

Housing Help, Inc.

Laurel Hill Road Wellfield - Simulated Migration of Recharge Effluent Pumping at 1/2 Capacity and Long-Term Average Conditions

Figure 9

- Northport Harbor. The simulated effluent plume migrates into the upper-most portions of the Magothy aquifer. The minimum time of travel from the water table to the wellfield is 7.92 years.

- Under average conditions of water supply pumping at the Laurel Hill Road wellfield, and long-term average recharge rates, the recharge area is outside the wellfield's contributing area (approximately 5,000 feet north), and the minimum time of travel from the water table to the wellfield is 19.59 years. The hypothetical effluent plume remains within the upper glacial aquifer.

APPENDIX D

gary d. cannella associates • architects • planners
gary d. cannella, ra. • donald a. kolacki, ra. • steven c. cannella, ra.

December 19, 2003

Eastern Paralyzed Veterans Association
111 West Huron Street
Buffalo, NY 14202-2301

Attn: Mr. Dominic Marinelli

Re: **Matinnecock Court**
Northport, NY

Dear Mr. Marinelli:

At the request of Mr. James Morgo and Mr. Peter Elkowitz of the Long Island Housing Partnership I am sending you "preliminary sketches" for the lower level units of our proposed project.

We have a great deal of experience in this field, however, it is always valuable to have someone such as yourself to offer comments and suggestions regarding accessibility and the ADA.

Please note, the specific details and sizes have not been drafted at this time and obviously you can only comment on general layout and relative proximity issues.

All doorways, hardware, appliances, toilet accessories, electric outlets, thermostats, thresholds, clearances, etc. will conform to EPVA and ADA published guidelines.

Thank you for your input.

Very truly yours,

Gary D. Cannella, Architect
Gary D. Cannella Associates

GDC:cmw

cc: Peter Elkowitz
Susan Lagville

55 knickerbocker avenue • bohemia, new york 11716
tel 631.563.5100 • fax 631.563.5102

APPENDIX E

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925
Website: www.dec.state.ny.

Erin M. Crotty
Commissioner

January 8, 2004

Kim A Gennaro
Freudenthal & Elkowitz Consulting Group, Inc
368 Veterans Memorial Highway
Commack, NY 11725

Dear Ms. Gennaro:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Matinecock Court Housing Development, site as indicated on the map you provided, located in the Town of Huntington, Suffolk County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

The presence of rare species may result in this project requiring additional permits, permit conditions, or review. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,
Heidi Krahling jp
Heidi J. Krahling, Information Services
NY Natural Heritage Program

Encs.
cc: Reg. 1, Wildlife Mgr.

Orland J. Blanchard, Jr., Ph.D.
Freudenthal & Elkowitz Consulting Group, Inc.

368 Veterans Memorial Highway • Commack, New York 11725
Telephone: (631) 499-2222 • Facsimile: (631) 499-5928

PRESENT POSITION:

Dr. Blanchard is a Senior Environmental Scientist with Freudenthal & Elkowitz Consulting Group, Inc. who specializes in ecology and is a Professor of Biology at Long Island University, C.W. Post Campus.

PROFESSIONAL EXPERIENCE:

Dr. Blanchard is a broadly trained and respected field biologist with an extensive knowledge of the biota of the Northeast and with a range of expertise in wetlands evaluation, botanical and invertebrate inventory and the study of rare and endangered plants and animals.

Prior to establishing himself on Long Island in 1980, Dr. Blanchard lived and studied in Massachusetts, upstate New York and Indiana. Teaching and field research have taken him throughout the United States and to the West Indies, Mexico, Central America, and East Africa.

Dr. Blanchard has been active as a consultant and contractee since 1984, working directly or indirectly for such clients as the City of New York, the State Department of Transportation, the State Department of Environmental Conservation, the New York Natural Heritage Program and The Nature Conservancy. This work has included freshwater wetlands flagging and classification, botanical inventories, insect inventories, rare insect surveys, tiger salamander searches, and studies of the ecology of the federally endangered sandplain gerardia.

Dr. Blanchard has been associated with Freudenthal & Elkowitz Consulting Group, Inc. since 1989, and representative projects for which Dr. Blanchard has performed ecological investigations include:

- NYSDEC Wetland delineation and ecological assessment for 20+ acre proposed residential subdivision in Brookhaven;

- Ecological impact assessments as part of environmental impact statements prepared by Freudenthal & Elkowitz Consulting Group, Inc. throughout Long Island;

- NYSDEC and USACOE wetland delineation and ecological assessment for 23+ acre proposed residential development in Kings Point; and

PROFESSIONAL EXPERIENCE: (Cont'd.)

- Ecological investigation for proposed 22+ acre commercial center in Stony Brook.

Dr. Blanchard is a recognized field biologist on Long Island. Dr. Blanchard is a past President (1988-89) of the Long Island Botanical Society; and Chairman of a committee that is preparing an atlas of the plants of Long Island; a past member of the Board of Trustees of The Nature Conservancy and past Chairman of the Board's Stewardship Committee; and member of the Natural History Advisory Board of the Friends of Long Island Heritage. He has recently been named to the Advisory Committee of the New York Flora Association. At the present time he is collaborating with a fellow botanist on a comparative study of the grasslands of Long Island.

In his academic capacities, Dr. Blanchard has taught graduate courses in Ecology, Entomology and Vascular Plants of Long Island, and as Director of the Graduate Environmental Studies Program at C.W. Post he has established numerous contacts in the environmental community on the Island.

EDUCATION:

Ph.D., Botany, Cornell University, 1976 (major: Plant Taxonomy; minors: Plant Ecology and Entomology)

A.B., Biology, Clark University, 1966

APPENDIX F

HOUSING HELP
AT
MATINECOCK COURT

TOWN OF HUNTINGTON
SUFFOLK COUNTY, NEW YORK

TRAFFIC IMPACT STUDY

RMS JOB NO.2003-080

JUNE 2004
REVISED DECEMBER 2005

RMS ENGINEERING
Robinson, Muller & Schiavone Engineers, P.C.

355 New York Avenue, Huntington, NY 11743 • 631-271-0576 • Fax 631-271-0592

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APPENDIX B — LEVEL OF SERVICE (LOS) DESCRIPTIONS
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APPENDIX D — CAPACITY ANALYSIS WORKSHEETS – EXISTING CONDITIONS
- I. Signalized Intersections

APPENDIX E — CAPACITY ANALYSIS WORKSHEETS – NO BUILD CONDITIONS
- I. Signalized Intersections

APPENDIX F — CAPACITY ANALYSIS WORKSHEETS – BUILD CONDITIONS
- I. Signalized Intersections
- II. Unsignalized Intersections

INTRODUCTION

The proposed project (Matinecock Court) is for the construction of 155 Condominium (77 ownership, 78 rental) units on a 14.57 ± acre site, located on the northwest corner of Pulaski Road (County Road 11) and Elwood Road (County Road 10), in the Hamlet of East Northport, the Town of Huntington, Suffolk County. The subject parcel is zoned R-3M Residential Zoning District. The project is visually depicted on the site plan prepared by Land Design Engineers. The location of Matinecock Court within the study area is visually depicted on Figure 1 – Location Map of Appendix A.

RMS conducted a detailed investigation of the potential traffic impacts of the traffic generated by the project on the surrounding street system. This report reviews existing roadway and traffic conditions in the area, estimates the volume and pattern of traffic generated by the proposed project, and summarizes the results. The effect of additional traffic on the surrounding roadway network is also analyzed.

PROJECT DESCRIPTION

Existing Land Use

1. The 14.57 ± acre site is located on the northwest corner of Pulaski Road (County Road 11) and Elwood Road (County Road 10), in the Hamlet of East Northport, the Town of Huntington, Suffolk County. Currently, the site is undeveloped.

2. The land uses in the vicinity of Matinecock Court are primarily residential. However to the north of Matinecock Court is the Long Island Power Authority (LIPA) Elwood Substation and to the west of Matinecock Court is the Long Island Railroad right of way. To the east of Matinecock Court is the Pulaski Road School (elementary) and on the southwest corner of Pulaski Road (County Road 11) and Elwood Road (County Road 10) is a Mobil Gas station.

Zoning

1. As previously mentioned, the subject parcel is zoned R-3M Residential Zoning District.

Access

1. There will be one access driveway to Matinecock Court. The access driveway will be on Pulaski Road (CR 11), approximately 610 feet to the west of Elwood Road (CR 10). This driveway will be unsignalized. Upon receiving approval from the Suffolk County Department of Public Works (SCDPW) an exclusive eastbound left turn lane and an exclusive westbound right turn lane will be provided for vehicles entering the project site.

2. On Elwood Road (CR 10), approximately 400 feet to the north of Pulaski Road (CR 11), there will be an emergency access driveway that will remain gated at all times. This driveway will not be available for traffic entering and exiting the site; it will only be available when the gate is opened for emergency vehicles. This driveway will be unsignalized.

3. As per the Town of Huntington Interoffice Memorandum dated May 12, 2005 from Peter A. Wolpensinger, PE to Richard Machtay, existing traffic signal equipment on the north side of Pulaski Road and at the intersection of Pulaski Road at Elwood Road will

potentially be impacted due to the construction of the proposed project. At the appropriate time, the applicant will submit the appropriate traffic signal plans to the Town of Huntington and/or SCDPW for their review and approval to repair the impacted equipment.

Parking

1. As per a letter from Kenneth Fine, Planner (for Richard Machtay, Director of Planning) to Susan Lagville, Executive Director of Housing Help Inc., dated June 15, 1995, it is stated that "Under the revised parking ordinance [Ord. No. 94-ZC-19, 12/6/94], multiple family dwellings no longer require 1 1/3 parking spaces per dwelling unit." Therefore, Matinecock Court must provide 3 parking spaces per unit.

2. However, as per the court ruling of The Huntington Branch of the NAACP v. Town of Huntington, the parking requirements for Matinecock Court must comply with the provisions of the Town of Huntington Zoning Code, Sections 198-44 through Section 198-49, as it existed prior to December 6, 1994.

3. For the 155 units provided, there are 207 parking spaces required as per the Town of Huntington Zoning Code, Sections 198-44 through Section 198-49, as it existed prior to December 6, 1994.

4. As indicated on the site plan, there are 326 parking stalls provided for the project site. The 326 parking stalls exceed the 207 stalls required. A variance for parking is not required.

5. Appendix A contains a copy of the previously mentioned letter from Kenneth Fine to Susan Lagville.

STUDY METHODOLOGY

RMS' approach to conducting this investigation involved the following:

1. A detailed review of existing land use, roadway characteristics and traffic conditions in the vicinity of the proposed site.

2. Traffic volumes were determined from field counts collected by this firm in May 2003. The specific locations studied are as follows:
   - Pulaski Road (CR 11) at Elwood Road (CR 10)
   - Pulaski Road (CR 11) at Stony Hollow Road

3. The traffic volumes were analyzed to determine the intersections' Levels of Service (LOS) at the study locations. Capacity analyses to compute the intersection LOS were performed for both existing and future conditions. The future conditions consist of two scenarios, "No Build" and "Build".

4. An ambient traffic growth rate factor of 1.00% per year, obtained from by the NYSDOT, was applied to the existing intersection volumes for expansion to year 2006 design levels. The "No Build" condition analysis determined the future LOS at the study intersections assuming the project is not constructed.

5. The 2006 "Build" condition analysis considered the impact of the traffic generated by the construction of the proposed development. This traffic was then superimposed onto the 2006 "No Build" volumes at the study locations.

EXISTING TRAFFIC CONDITIONS

Roadway Network

Current roadway conditions in the study area are summarized below:

1. Pulaski Road (CR 11): This is an east west minor arterial under the jurisdiction of Suffolk County Department of Public Works (SCDPW). It consists of one through lane in each direction with a two-way left turn lane provided between Stony Hollow Road and Elwood Road (CR 10). There is no parking permitted on Pulaski Road (CR 11) within the project limits. There is a 40 mph speed limit on Pulaski Road (CR 11).

2. Elwood Road (CR 10): This is a north-south minor arterial under the jurisdiction of the Suffolk County Department of Public Works (SCDPW). It consists of one travel lane in each direction with turning lanes where appropriate. There is no parking permitted on Elwood Road (CR 10) within the project limits. There is a 30 mph speed limit on Elwood Road (CR 10).

3. Stony Hollow Road: This is a north south roadway under the jurisdiction of the Town of Huntington. It consists of one travel lane in each direction. There is a 30 mph speed limit on Stony Hollow Road.

Study Intersections

The following are the current traffic control conditions for the study intersections:

1. Pulaski Road (CR 11) at Elwood Road (CR 10) (three-phase signalized)
2. Pulaski Road (CR 11) at Stony Hollow Road (signalized)

Traffic Volume Data

1. As previously mentioned, traffic volume turning movement counts at the study locations were collected for this application. This data was collected on Thursday May 8, 2003 and on Saturday May 3, 2003, by this firm during the weekday AM commuter peak (7:00-9:00am), PM commuter peak (4:00-6:00pm) and Saturday peak hours (11:00am-3:00pm).

2. The peak hour during each of these periods at each intersection was computed to represent the most conservative depiction of the traffic volumes experienced at each location. The peak hour traffic volumes at the study intersections are tabulated in Appendix C. Figures 2 through 4 of Appendix A contain a visual depiction of the traffic volume data for the AM, PM and Saturday peak hours.

Capacity Analysis

1. The traffic volumes, in conjunction with the intersection geometry and signal timings/phasing, where applicable, were then used to determine the existing capacity and Level of Service (LOS) of the study intersections. The capacity analyses were performed by this firm in accordance with guidelines set forth in the **Highway Capacity Manual** published by the **Transportation Research Board**.

2. The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity is defined for each approach and measures the maximum rate of flow (for the subject approach), which may pass through the intersection under prevailing traffic, roadway and signalization conditions. The LOS of a signalized intersection is evaluated on the basis of average stopped delay measured in seconds per vehicle (sec/veh). A more detailed definition of LOS is provided in Appendix B.

3. The capacity of an unsignalized intersection is based on two factors. The first factor is the distribution of gaps in the major street traffic. The second factor is driver judgment in selecting gaps through which to execute their desired maneuver. Refer to Appendix B for further definition of LOS for an unsignalized intersection.

4. The capacity analyses for the signalized and unsignalized study intersections were performed using the Highway Capacity Software or "HCS", which was prepared by the Federal Highway Administration. "HCS" is a series of computer programs strictly adhering to the guidelines set forth in the **Highway Capacity Manual**. The capacity analysis/LOS worksheets for the study intersections are contained in Appendix D.

5. The results of the analysis for the signalized intersections are contained in Table 1 of Appendix A, and indicate the following:
   - At the intersection of Pulaski Road (CR 11) and Elwood Road (CR 10), the intersection is currently operating below capacity during the AM Peak hour. During the PM and Saturday Peak hour, the overall operation of the intersection is running below capacity, however there are individual movements and approaches that are operating at or above capacity.
   - At the intersection of Pulaski Road (CR 11) at Stony Hollow Road, the overall intersection and its individual movements are operating below capacity during the time periods studied.

FUTURE TRAFFIC CONDITIONS

Ambient Traffic Growth

1. As previously indicated, the future traffic conditions were determined by applying a 1.00% annual growth rate, obtained from the NYSDOT, to the existing traffic volumes for 2006 design conditions.

Other Planned Projects

1. Information obtained from the Town of Huntington Planning Department and the SCDPW revealed that there are no planned projects or developments in the vicinity of the site.

Roadway Improvements

1. Discussions with representatives of the Suffolk County Department of Public Works (SCDPW) indicate that there are no planned roadway construction or improvement projects in the vicinity of the site (at the time of the data collection).

No Build Traffic Volumes

1. Appendix C contains a tabular summary of the "No Build" traffic volumes. Figures 5 through 7, located in Appendix A, contain a visual depiction of the "No Build" traffic volumes.

Site Trip Generation

1. As previously mentioned, the proposed project (Matinecock Court) is for the construction of 155 Condominium units on a 14.57 ± acre site, located on the northwest corner of Pulaski Road (County Road 11) and Elwood Road (County Road 10), in the Hamlet of East Northport, the Town of Huntington, Suffolk County.

2. As part of this investigation, an estimate was prepared of the quantity of traffic generated by Matinecock Court. These estimates were prepared utilizing the **Institute of Transportation Engineers (ITE) Trip Generation Manual, 7th Edition, 2003**. In order to maintain a conservative analysis two different Land Use Codes were used to

compute the trip generation for the proposed project. Land Use Code 230 (Condominium/Townhouse) was utilized to estimate the trips generated by the 77 ownership units. Land Use Code 220 (Apartments) was utilized to estimate the trips generated by the 78 rental units. The trip generation computations are summarized in Table 2. We believe that this provided the most conservative depiction of the site generated traffic.

3. As shown in Table 2 of Appendix A, it is anticipated that Matinecock Court will generate a total of 84 trips during the weekday AM Commuter peak hour (15 entering, 69 exiting), 109 trips during the weekday PM Commuter peak hour (72 entering, 37 exiting) and 116 trips during the Saturday peak hour (60 entering, 56 exiting).

Traffic Distribution and Assignment

1. The next step of the investigation consisted of an analysis of the geographical distribution of the traffic to and from the site. In order to determine the distribution of the traffic generated by the site, a careful review of the existing travel patterns and the trip generators/receptors in the vicinity of the site was performed.

2. In order to properly assess the traffic impact of the proposal, it is necessary to determine which roadway(s) will most probably receive the newly generated traffic, in vehicular volume and direction, during the peak hours studied. The existing roadway network in the vicinity of the site was examined and the distribution of the site-generated traffic at each intersection was determined. (Refer to Appendix C for a tabular summary of the trip distribution and assignment). The percent distribution of the site traffic is contained in Figure 8. The traffic volumes associated with the proposed project are visually depicted on Figures 9 through 11. These volumes were added to the "No Build" peak hour volumes to obtain the "Build" volumes. The "Build" volumes are visually depicted in Figures 12 through 14 of Appendix A.

CAPACITY ANALYSIS CONCLUSIONS

1. As previously mentioned, future traffic volumes were prepared for the study locations, and were then used to perform the capacity analyses for the "No Build" and "Build" conditions.

2. These analyses were performed using the previously mentioned procedures outlined in the **Highway Capacity Manual (Special Report 209)** published by the **Transportation Research Board**. The procedures listed in the **Highway Capacity Manual** permit the computation of intersection capacity and Level of Service (LOS). The capacity and LOS of an intersection has previously been defined in the existing conditions segment of this report. The capacity analysis/LOS worksheets are contained in Appendices E and F, while the results are summarized in Tables 3 and 4 of Appendix A.

3. Upon a review of the information contained in Tables 3 and 4, the following can be stated:

   a. Upon the introduction of the site-generated traffic, the intersection of Pulaski Road (CR 11) at Elwood Road (CR 10) will experience a minor increase in delay and no degradation in LOS during the time periods studied. There is no mitigation required at this location.

   b. Upon the introduction of the site-generated traffic, the intersection of Pulaski Road (CR 11) at Stony Hollow Road will experience an imperceptible increase in delay and no degradation in LOS during the time periods studied. There is no mitigation required at this location.

   c. Upon the introduction of the site-generated traffic, the proposed unsignalized site driveway on Pulaski Road (CR 11) will operate at acceptable Levels of Service during the peak hours studied.

PUBLIC TRANSPORTION

The project site is currently serviced by the H-4 and H-6 Huntington Area Rapid Transit (HART) bus lines. The H-4 line traverses between the Village of Northport and the Walt Whitman Mall offering stops at the Northport LIRR Station and the Greenlawn LIRR Station. The following are the connecting buses available for this line:

- Walt Whitman Mall: H-9, S-1, S-23, S-29, S-54 and N-79.
- Greenlawn LIRR Station: H-6W
- Northport LIRR Station: H-4N (VA), H-6E, S-4I

Where H denotes HART, S denotes Suffolk County Transit and N denotes Nassau (MTA LI Bus).

The H-6 line traverses between Macy's Plaza in Commack and Cold Spring Harbor Village offering stops at the Northport LIRR Station and the Greenlawn LIRR Station. The following are the connecting buses available for this line:

- Huntington (Main/NY): H-9, S-1
- Greenlawn LIRR Station: H-4
- Northport LIRR Station: H-4, S-41
- Huntington Square Mall (Sear's): S-41, S-58
- Macy's Plaza (Commack): S-54, S-56

Where H denotes HART and S denotes Suffolk County Transit.

There is currently a HART bus shelter located along the site frontage on the north side of Pulaski Road west of Elwood Road. Based on a discussion with a representative of HART, the bus lines currently run below 50% of capacity. Therefore, we would not anticipate any significant impacts due to the proposed project on Public Transportation.

HOUSING HELP
AT
MATINECOCK COURT

TOWN OF HUNTINGTON
SUFFOLK COUNTY, NEW YORK

TRAFFIC IMPACT STUDY

RMS JOB NO.2003-080

JUNE 2004
REVISED DECEMBER 2005

APPENDICES

RMS ENGINEERING
Robinson, Muller & Schiavone Engineers, P.C.

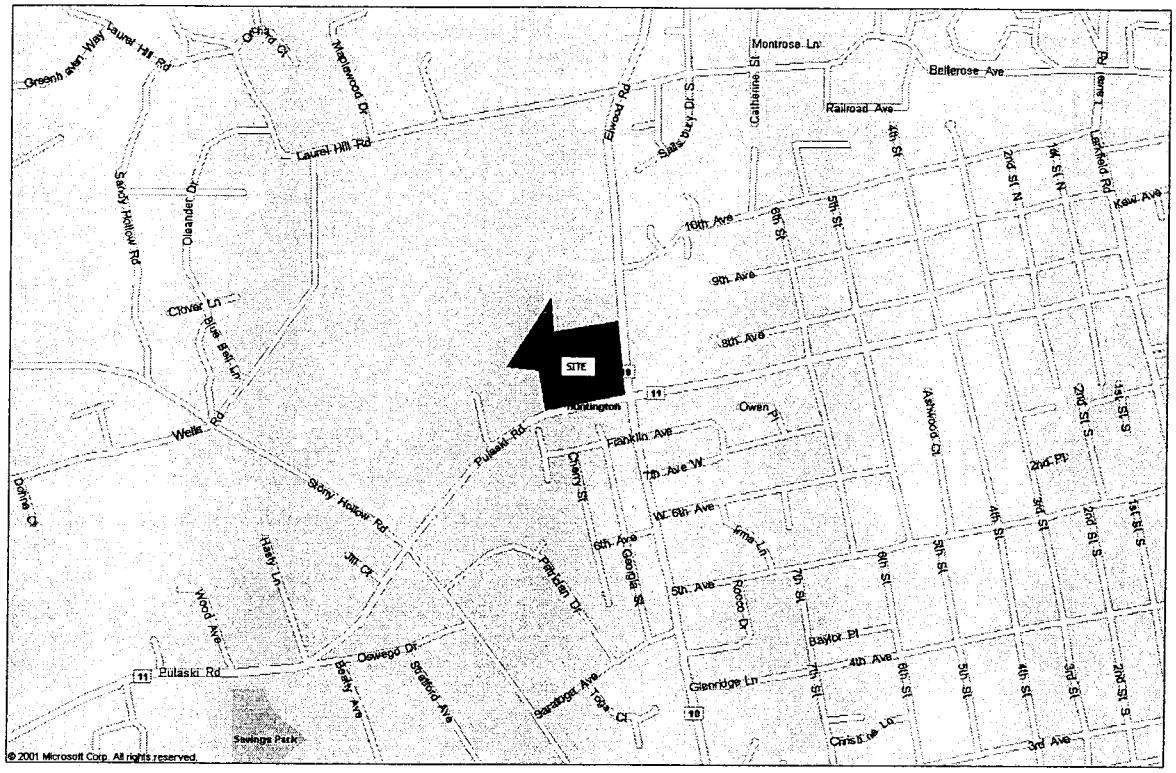
355 New York Avenue, Huntington, NY 11743 • 631-271-0576 • Fax 631-271-0592

APPENDIX A: FIGURES AND TABLES

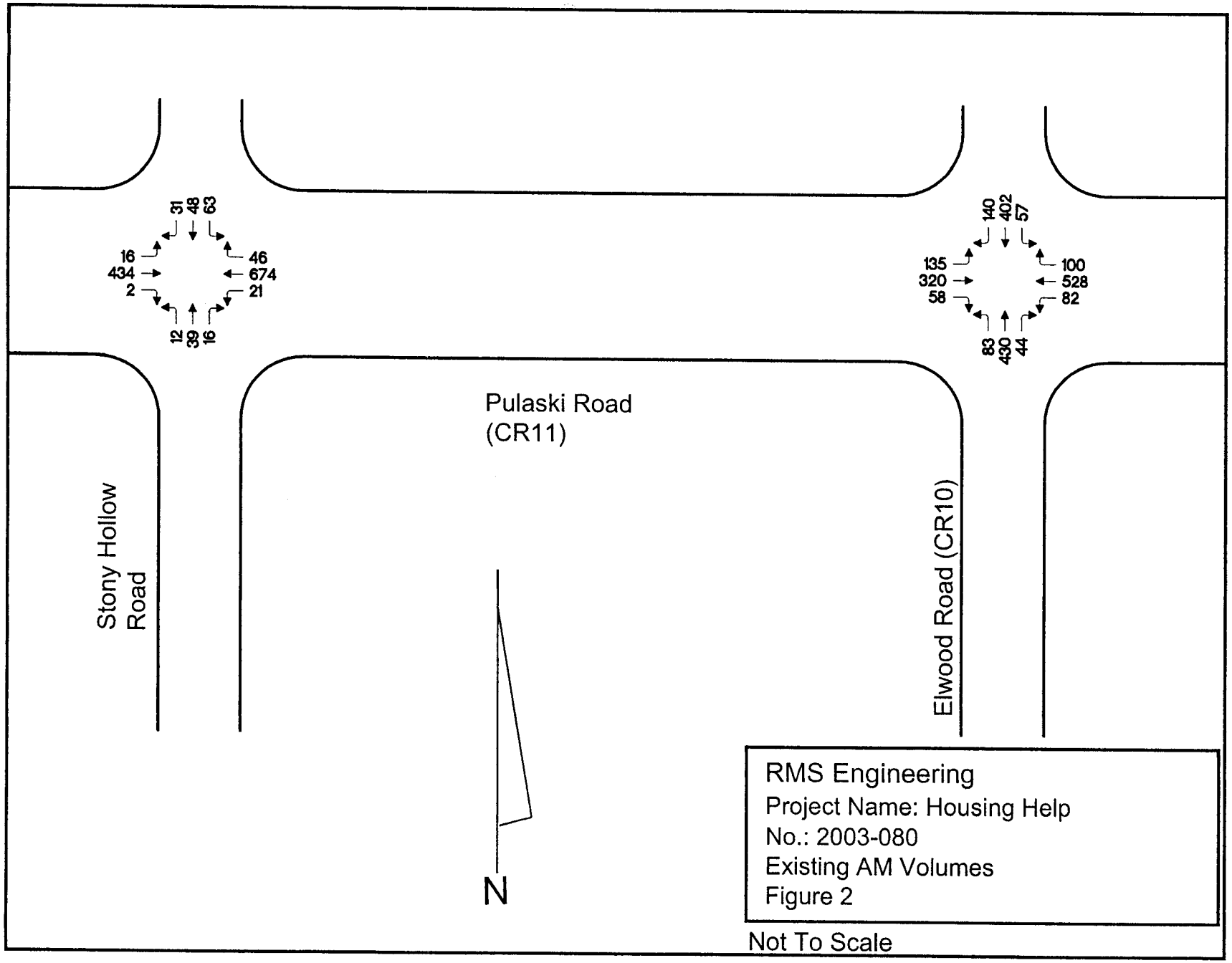
I. Figures
II. Tables
III. Letter

I. Figures

Figure 1, Project Location



RMS ENGINEERING



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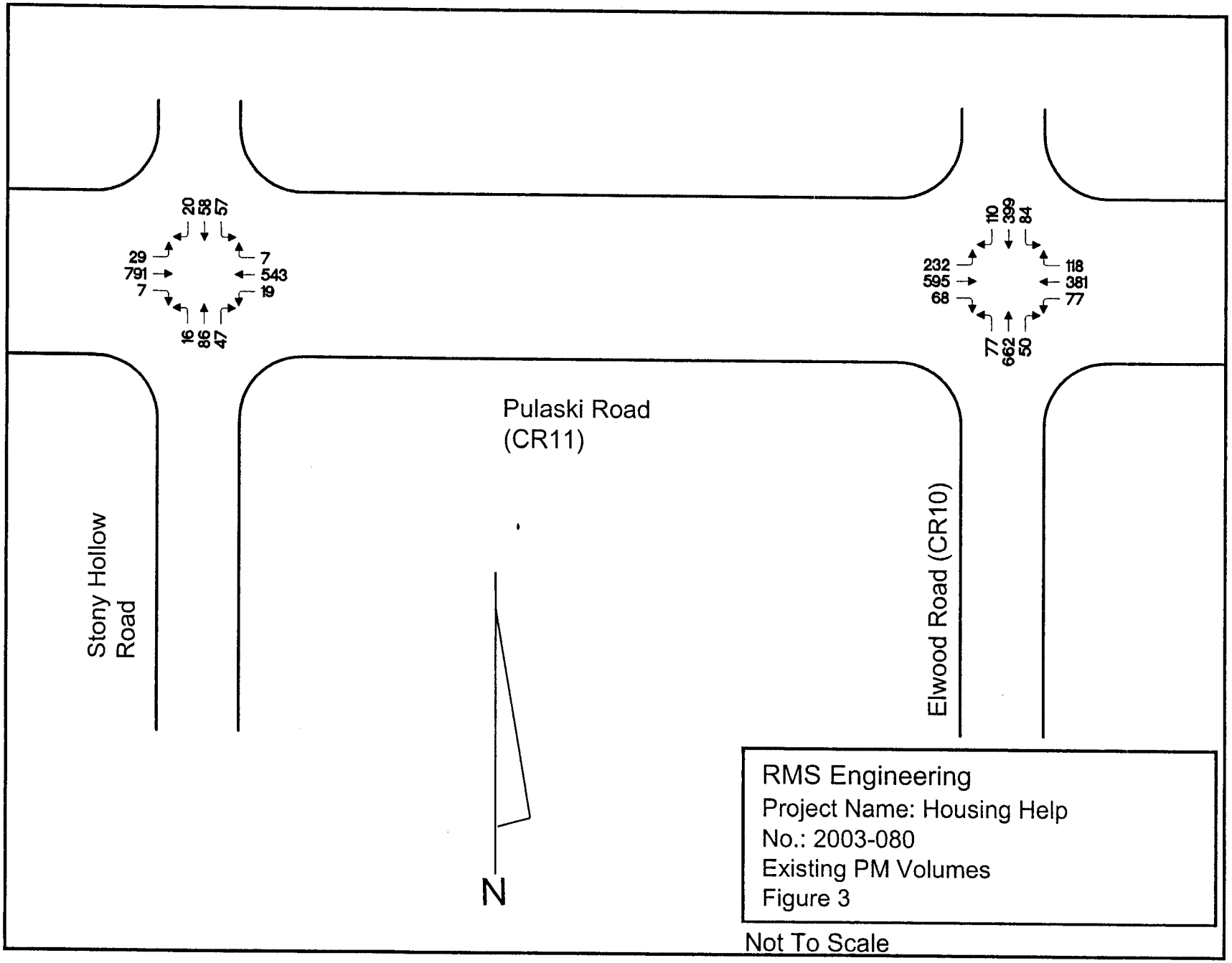

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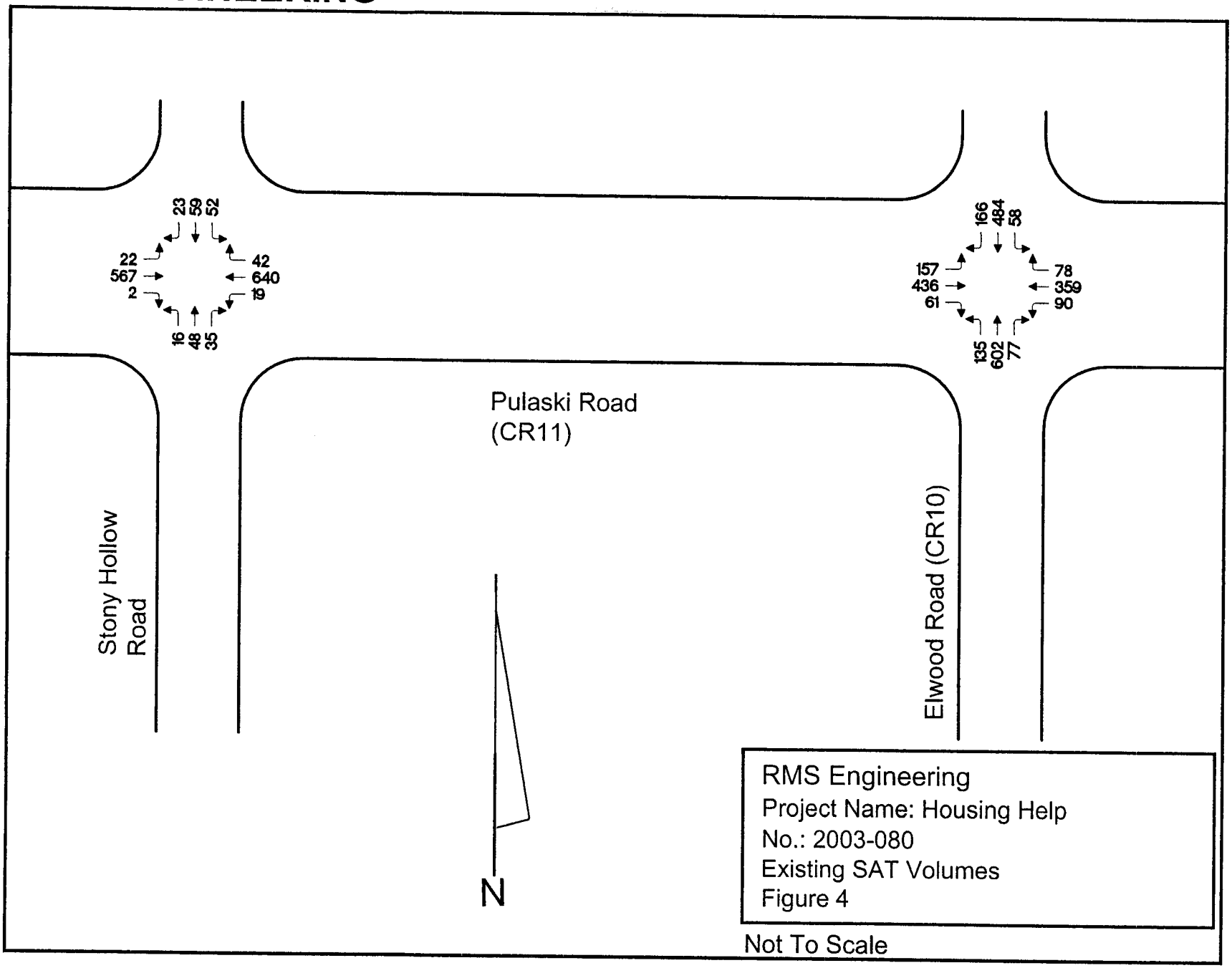

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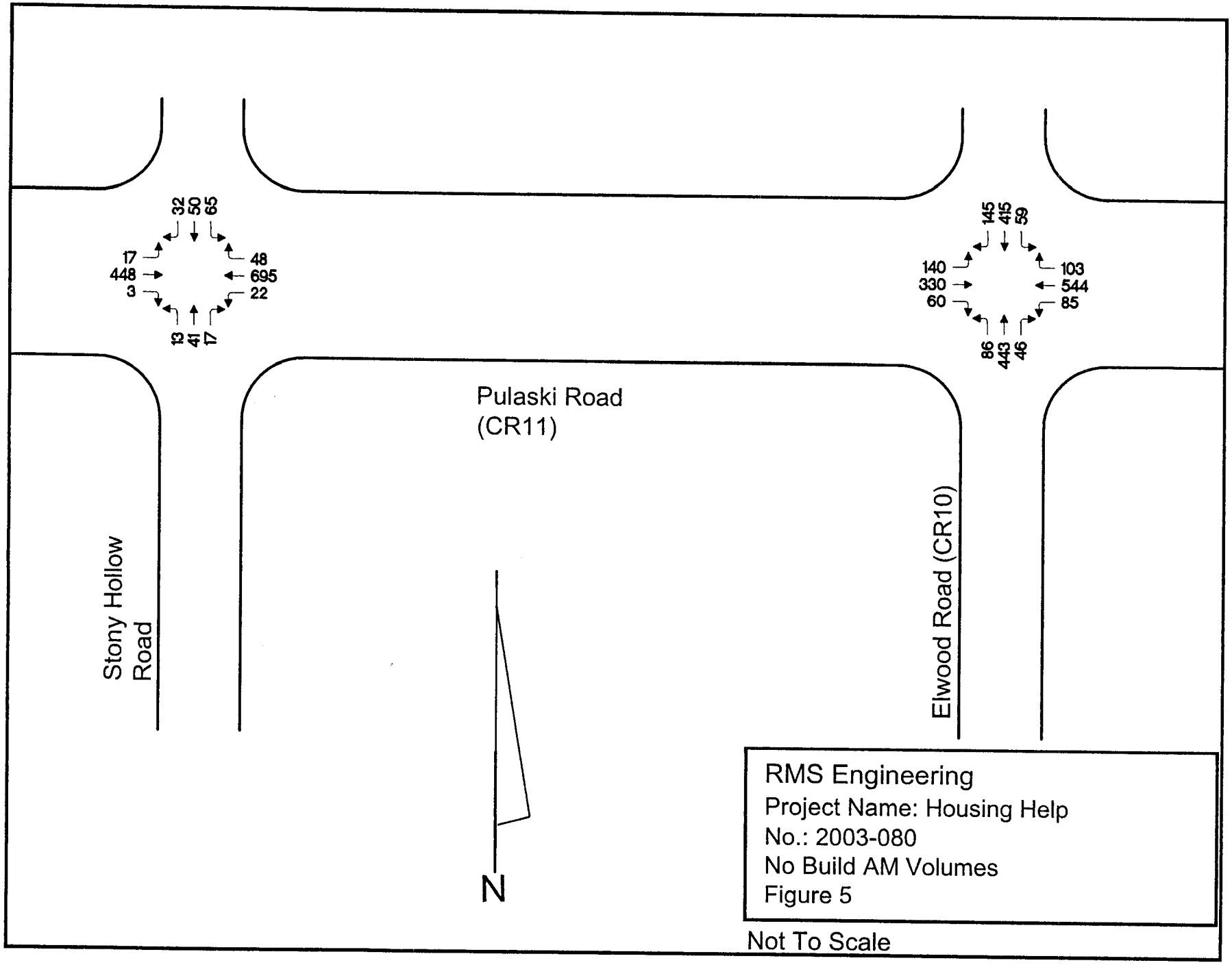

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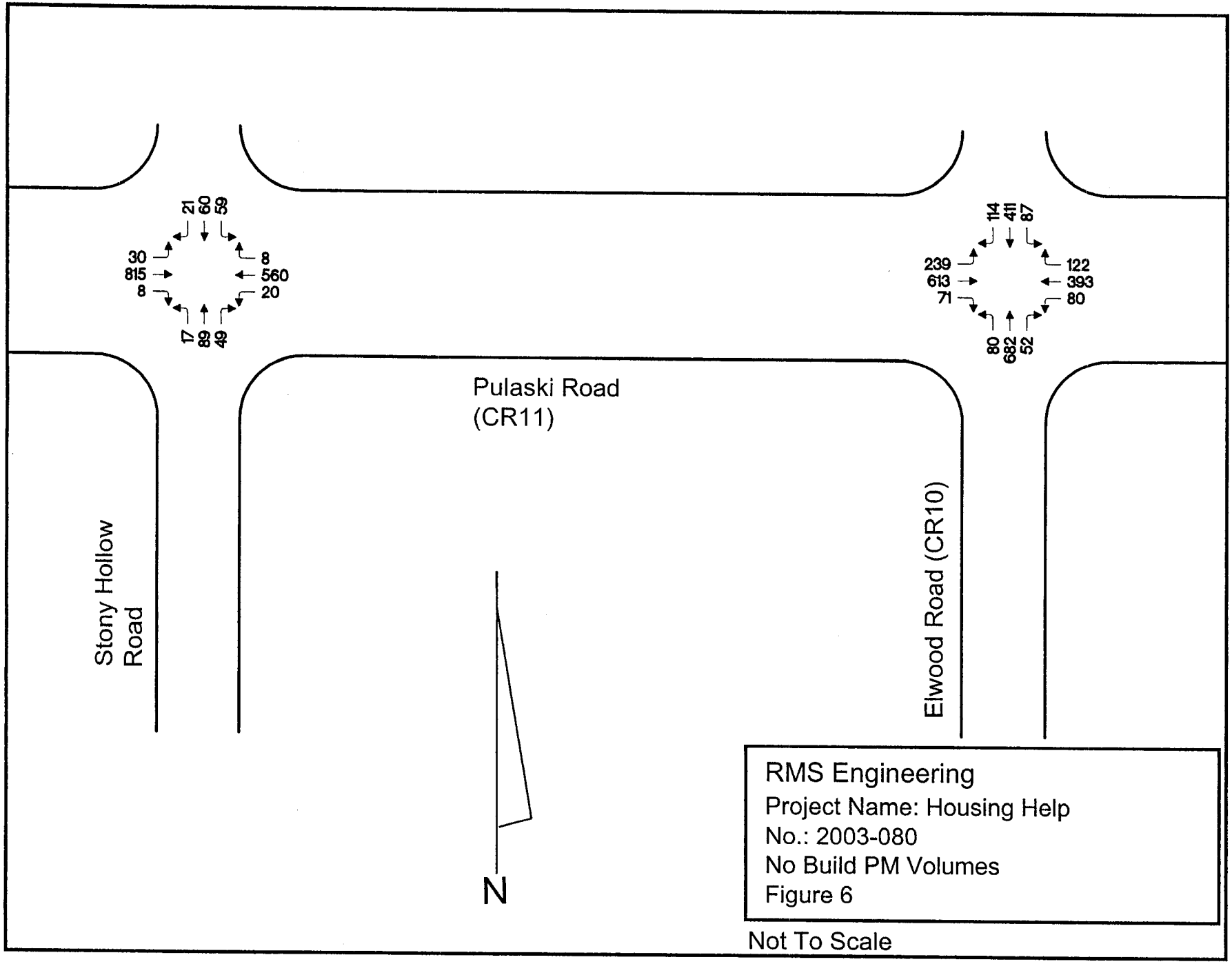

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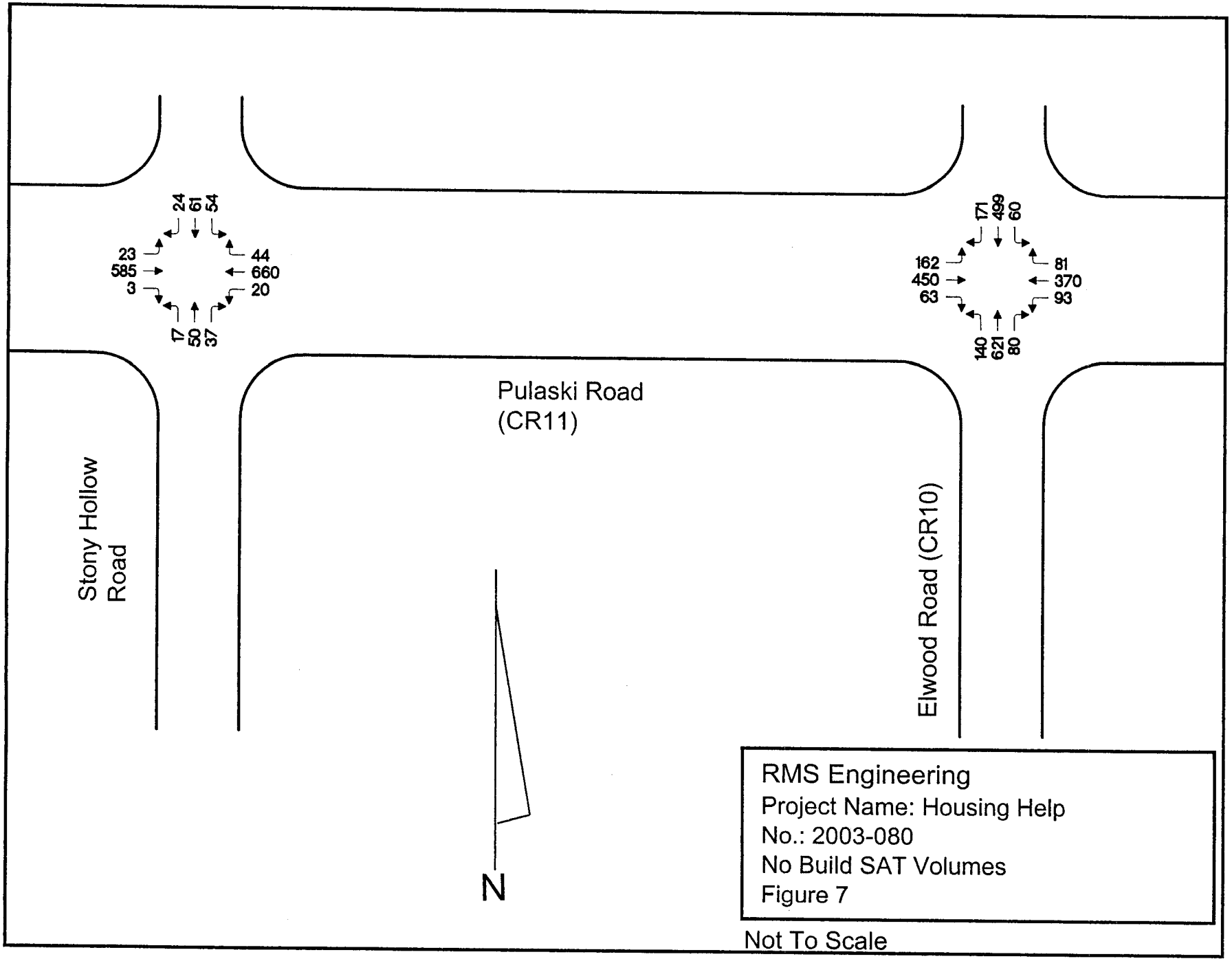

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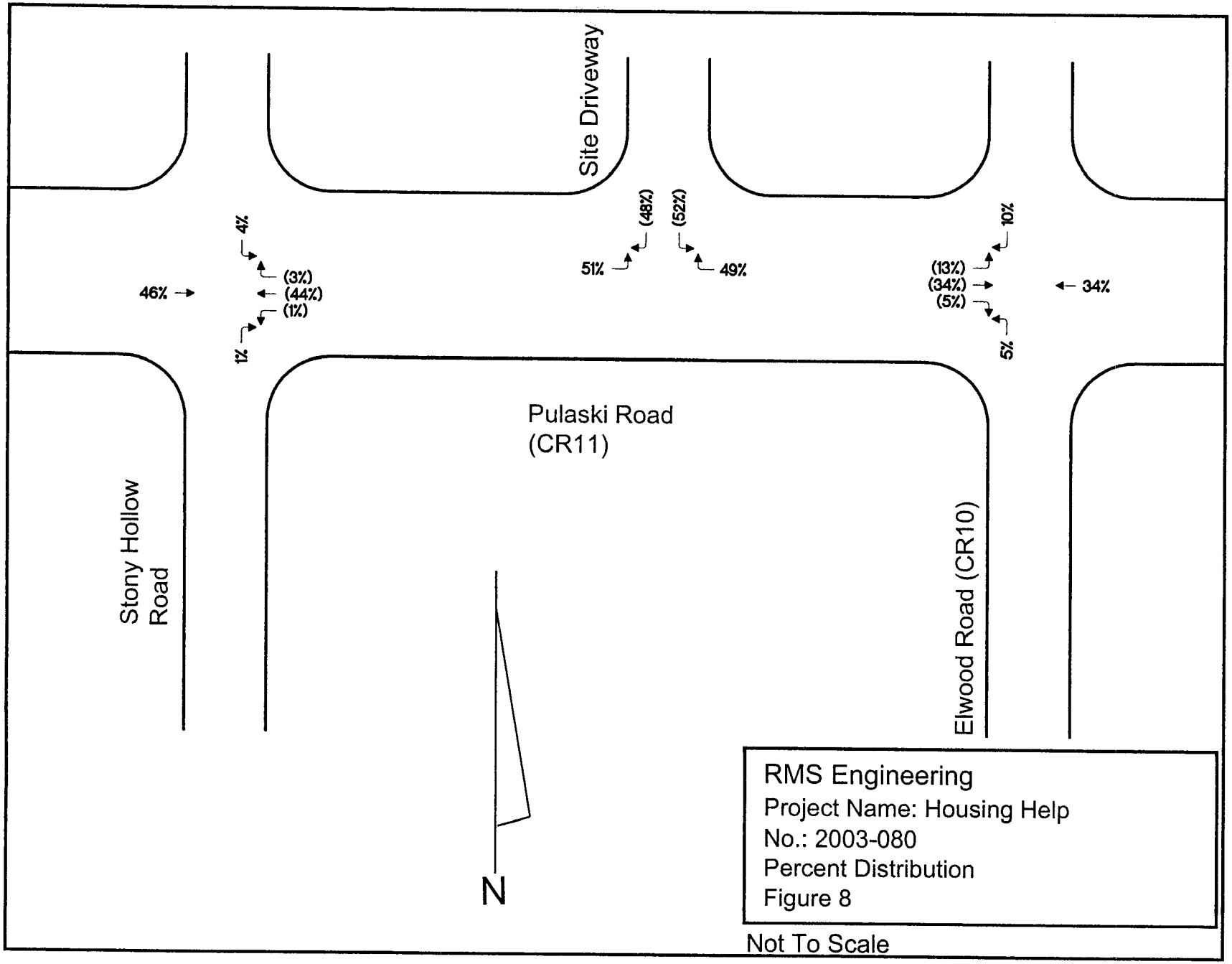
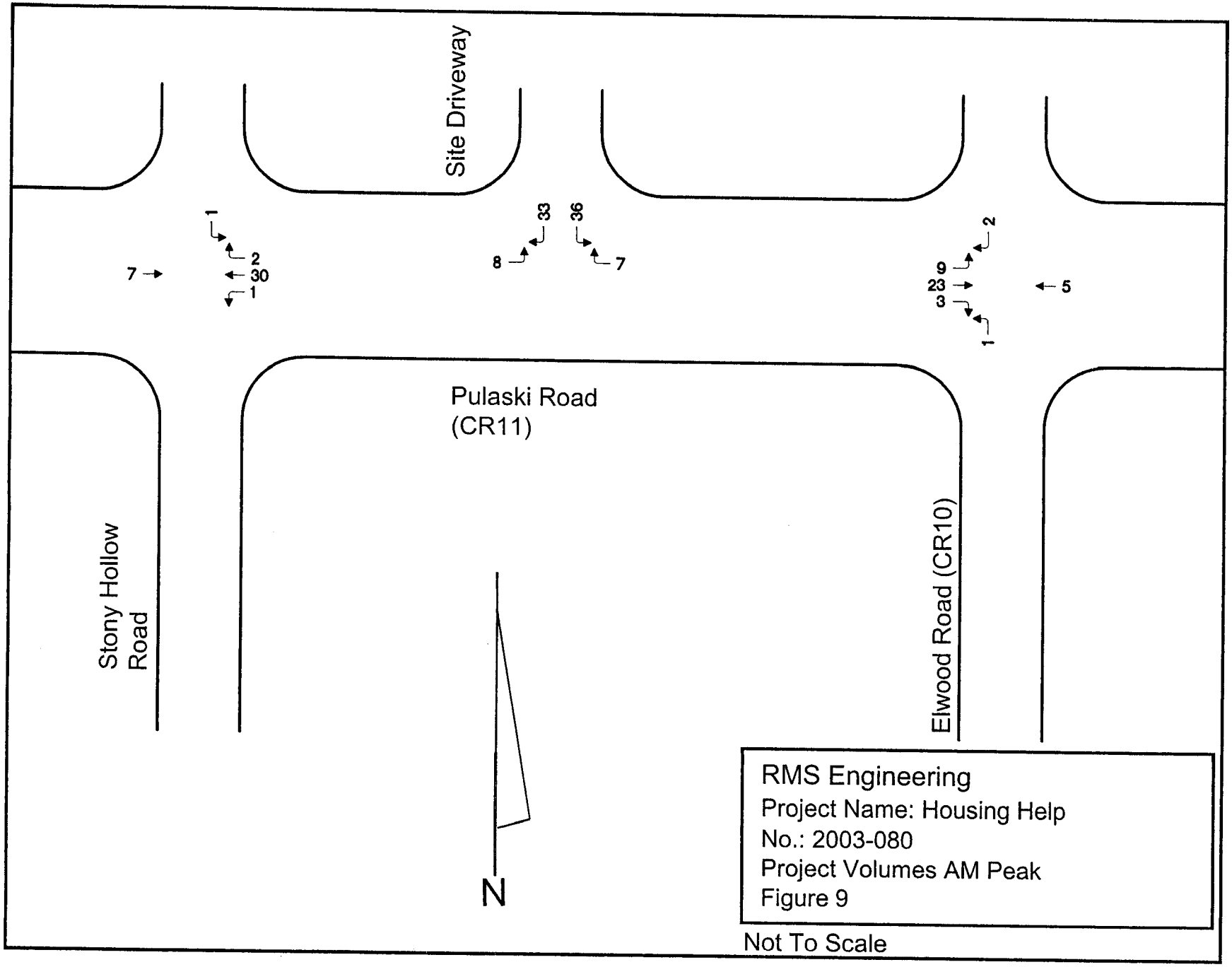
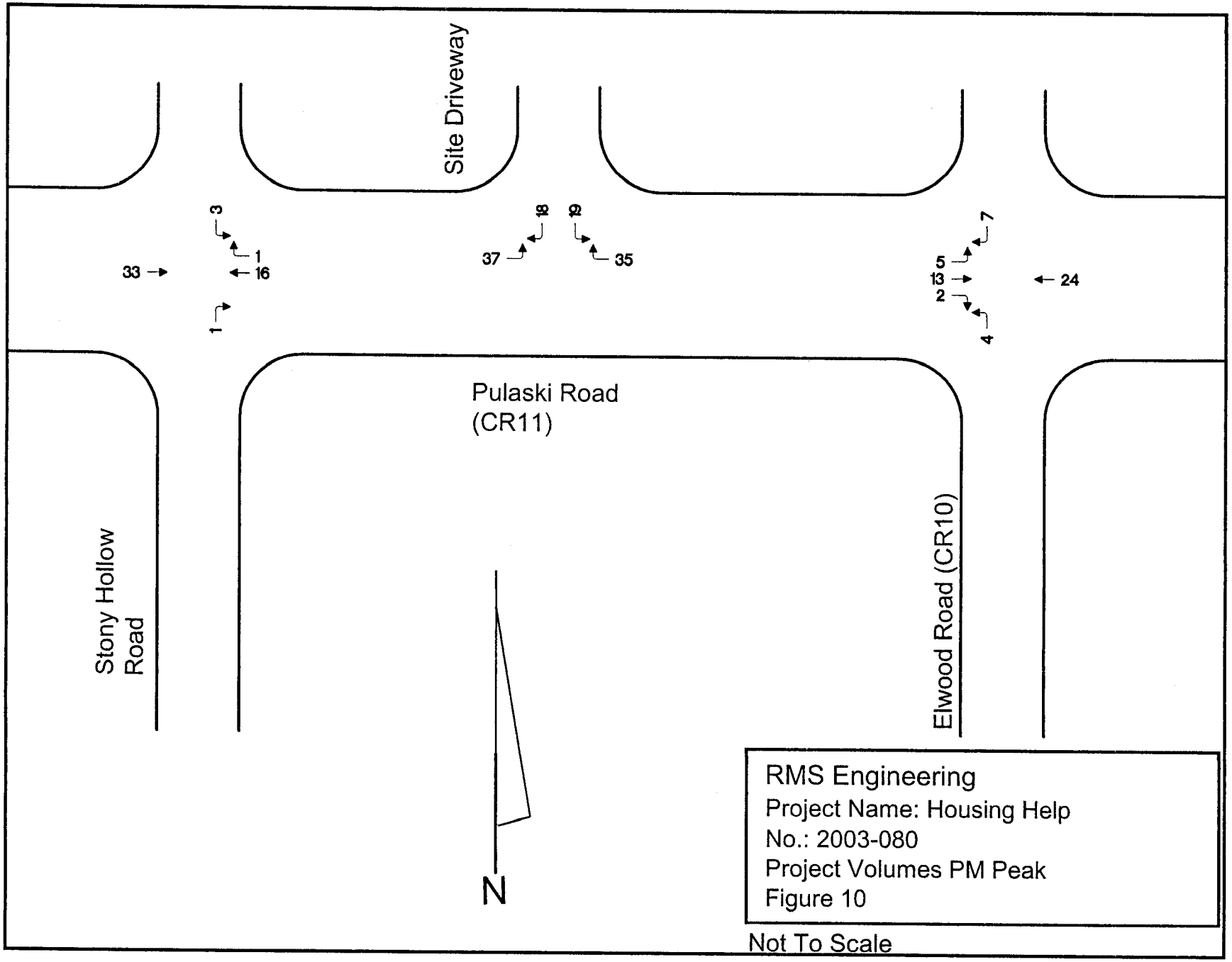



Site Driveway
1
2
30
1
7
33
36
8
7
2
9
23
3
1
5
Pulaski Road
(CR11)
Stony Hollow
Road
Elwood Road (CR10)
N
RMS Engineering
Project Name: Housing Help
No.: 2003-080
Project Volumes AM Peak
Figure 9
Not To Scale

RMS ENGINEERING



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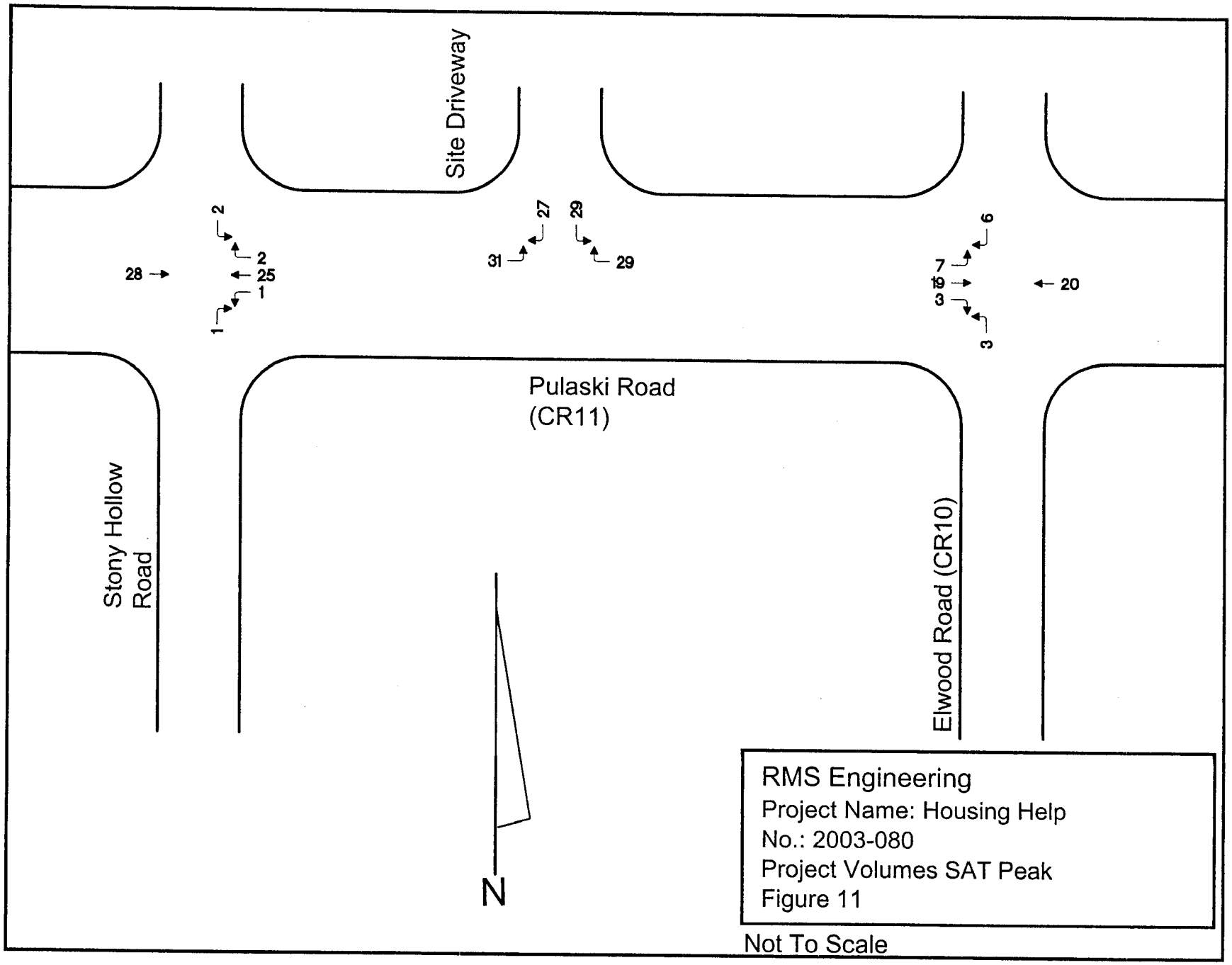

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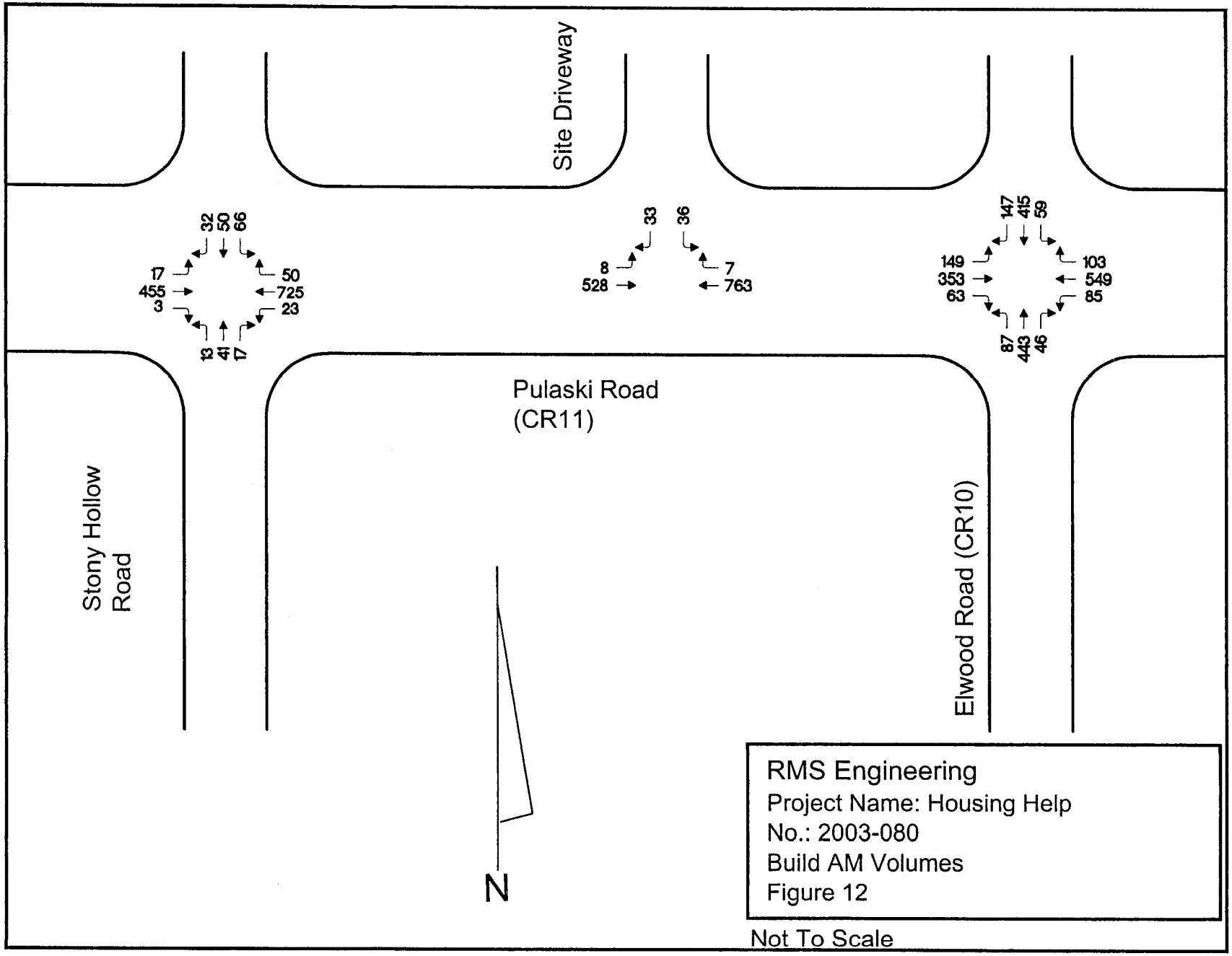

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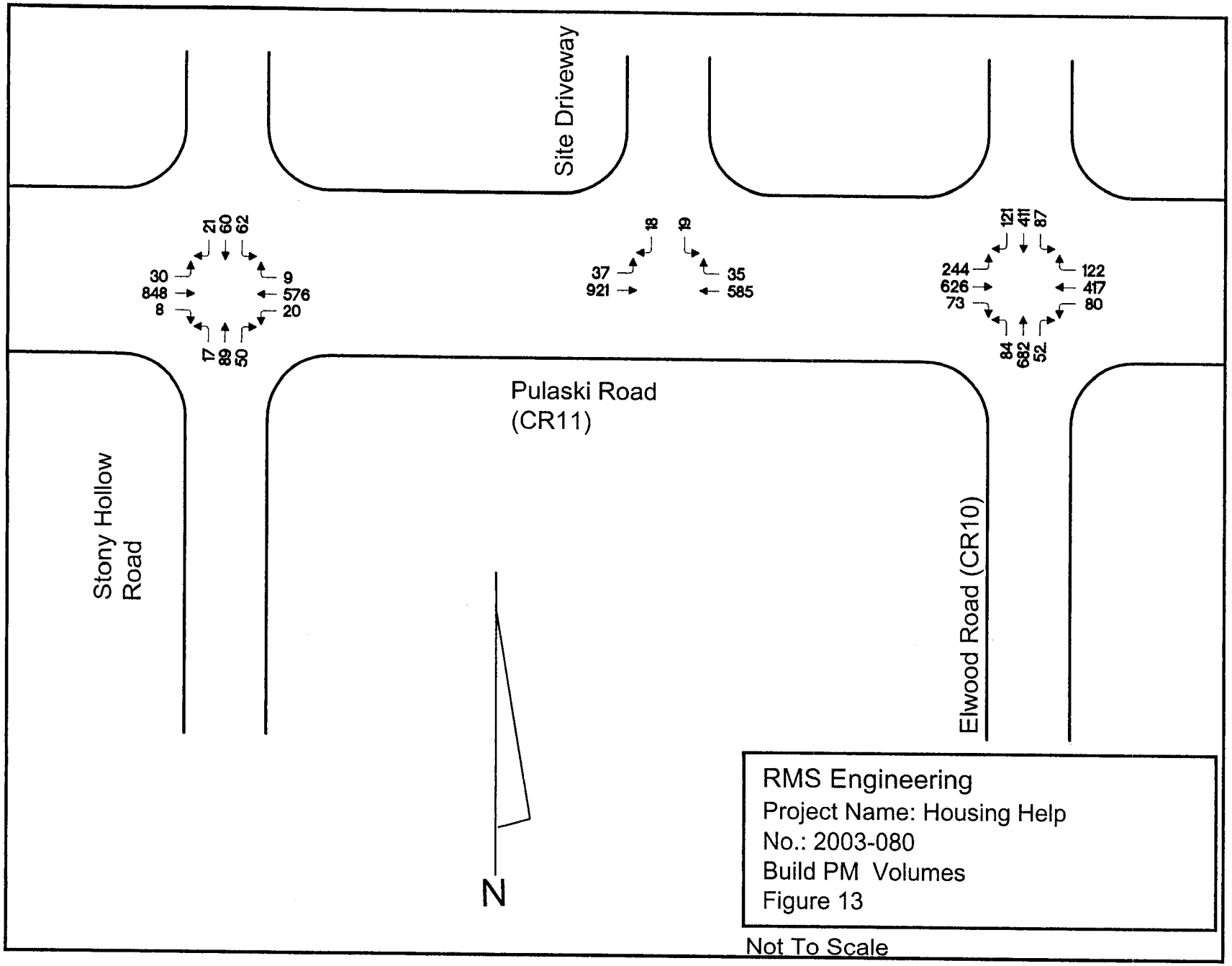

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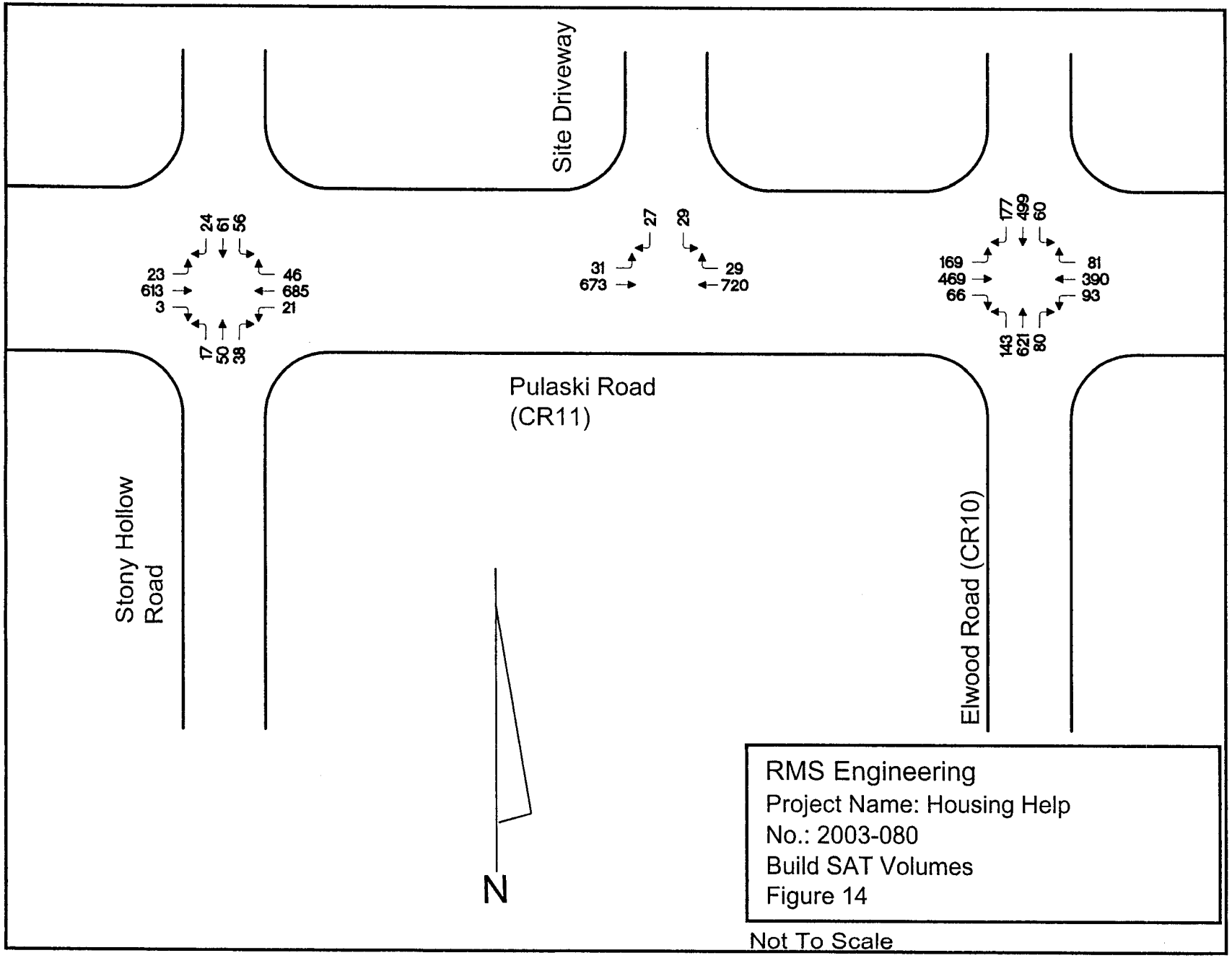

II. Tables

RMS ENGINEERING

TABLE 1

HOUSING HELP @ MATINECOCK COURT
LEVEL OF SERVICE SUMMARY
SIGNALIZED INTERSECTIONS
EXISTING CONDITIONS
RMS JOB No. 2003-080
AUGUST 2003

		AM PEAK HOUR		PM PEAK HOUR		SAT PEAK HOUR	
INTERSECTION	CONDITION	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
PULASKI ROAD (CR11) AT ELWOOD ROAD (CR 10)	EXISTING	31.9	C	51.9	D	52.2	D
PULASKI ROAD (CR11) AT STONY HOLLOW ROAD	EXISTING	11.7	B	16.3	B	10.9	B

RMS ENGINEERING

TABLE 2

HOUSING HELP @ MATINECOCK COURT
TRIP GENERATION SUMMARY
PROPOSED TRIP GENERATION
RMS JOB No. 2003-080
AUGUST 2003

PEAK HOUR		78 UNITS APARTMENTS (RENATL)	77 UNITS CONDO/TOWNHOUSE (OWNERSHIP)	TOTAL 155 UNITS
LAND USE CODE		220	230	220/230
AM PEAK HOUR	ENTER:	8 tph	7 tph	15 tph
	EXIT:	34 tph	35 tph	69 tph
	TOTAL	42 tph	42 tph	84 tph
PM PEAK HOUR	ENTER:	39 tph	33 tph	72 tph
	EXIT:	21 tph	16 tph	37 tph
	TOTAL	60 tph	49 tph	109 tph
SATURDAY PEAK HOUR	ENTER:	25 tph	35 tph	60 tph
	EXIT:	26 tph	30 tph	56 tph
	TOTAL	51 tph	65 tph	116 tph

tph- trips per hour

RMS ENGINEERING

TABLE 3

HOUSING HELP @ MATINECOCK COURT
LEVEL OF SERVICE SUMMARY
SIGNALIZED INTERSECTIONS
FUTURE CONDITIONS
RMS JOB No. 2003-080
AUGUST 2003

		AM PEAK HOUR		PM PEAK HOUR		SAT PEAK HOUR	
INTERSECTION	CONDITION	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
PULASKI ROAD (CR11) AT ELWOOD ROAD (CR 10)	NO BUILD	35.3	D	57.2	E	58.6	E
	BUILD	36.0	D	59.3	E	63.0	E
PULASKI ROAD (CR11) AT STONY HOLLOW ROAD	NO BUILD	12.2	B	17.2	B	11.2	B
	BUILD	12.5	B	18.6	B	11.4	B

RMS ENGINEERING

TABLE 4

HOUSING HELP @ MATINECOCK COURT
LEVEL OF SERVICE SUMMARY
UNSIGNALIZED INTERSECTION
FUTURE CONDITIONS
RMS JOB No. 2003-080
AUGUST 2003

		AM PEAK HOUR			PM PEAK HOUR			SAT PEAK HOUR		
INTERSECTION	CONDITION	MVMNT	LOS	CONTROL DELAY (SEC/VEH)	MVMNT	LOS	CONTROL DELAY (SEC/VEH)	MVMNT	LOS	CONTROL DELAY (SEC/VEH)
PULASKI ROAD (CR11) AT SITE ACCESS	BUILD	EBL	B	10.0+	EBL	A	9.2	EBL	A	9.9
		SB	C	15.5	SB	B	14.8	SB	C	15.1

III. Letter

TOWN OF HUNTINGTON

FRANK P. PETRONE, *Supervisor*

RICHARD MACHTAY
Director of Planning

June 15, 1995

Susan R. Lagville, Executive Director
Housing Help Inc.
91 Broadway
Suite 6
Greenlawn, New Yk 11740

Re: MATINECOCK COURT - Site Plan dated 5/23/95
n/w/c Pulaski Road (CR 11) and Elwood Road (CR 10),
Greenlawn, SCTM # 0400-114-04-007

Dear Ms. Lagville:

Preliminary analysis indicates that the major constraints on the design of Matinecock Court will be providing the required number of parking spaces and providing satisfactory fire access to the dwelling units. Obviously, the amount of parking will impact the size of the recharge basin. The relative location of the sewage treatment plant, and how it affects what may be done with its surroundings is another factor. Given these, you were indeed correct in anticipating that revisions to the basic layout of the site might be enough to warrant delay of a fully engineered grading and drainage plan. On the other hand, working with your submitted plan reinforces the view that the scale of one inch (1") equals fifty feet (50') is too small.

Attached you will find a broad critique from within the Planning Department dated June 15, 1995. In addition, please note the observations listed below.

1. For ease of identification, it might be best to label the clusters of dwelling units (e.g., A, B, C, etc.)

2. Under the revised parking ordinance [Ord. No. 94-ZC-19, 12/6/94], multiple family dwellings no longer require 1 1/3 parking spaces per dwelling unit. In developments lacking garages or driveways, having paved roadways of less than 34 feet of width, three (3) parking spaces are now required for each dwelling unit. While under the previous ordinance 239 parking spaces would have been required this 179 unit proposal now requires 537 parking spaces. Increasing the roadway width to 34 feet reduces the requirement to 2.5 spaces per dwelling unit, or 448 spaces.

Susan R. Lagville
Housing Help, Inc.
Matinecock Court

June 15, 1995

3. You have provided enough center striped access ways to accommodate 62 handicapped accessible stalls, yet claim sixty (60) stalls. Identify which of the stalls are the handicapped accessible stalls.

4. Sixty (60) of the 243 stalls provided (nearly 25%) are handicapped accessible. We are not aware of any requirement for such a high percentage. Is this a funding requirement? [The Paumanack Village III multi-family senior citizen's project, approved in September, 1990, had four (4) of it's 25 parking spaces set aside as handicapped accessible, which is sixteen per cent (16%) of the total. The Paumanack Village IV multi-family senior citizen's project, approved in September, 1993 had eight (8) of 38 parking spaces set aside as handicapped accessible, which is slightly greater than 21 per cent of the total.]

5. Handicapped parking spaces shall be eight (8) feet wide, and are to be serviced by an eight (8) foot wide access way. Two (2) adjoining handicapped accessible stalls may share a common access for an overall width of 24 feet. When a non-handicapped accessible stall adjoins such a common access it may also be reduced from its normally required nine (9) feet to eight (8) feet.

6. Nearly all the handicapped accessible stalls have greater widths (scaled) than required (see #5 above).

7. Provide dropped curbs for the handicapped accessible stalls.

8. The minimum width of one-way drives shall be twelve (12) feet, while two (2) way drives shall be 24 feet.

9. Parking stalls head-in to any buffer shall be reduced in length from twenty (20) feet to eighteen (18) feet, while the adjoining buffer shall be increased by the corresponding two (2) feet to account for bumper overhang. Thus, a center drive with parking along both its sides will have sixty (60) feet of paving from curb to curb [18' + 24' + 18']. Scaling indicates some curb to curb widths of as much as 65 feet (20 foot stall lengths were drafted). A drive with parking along only one (1) of its sides will have 42 feet of paving from curb to curb [18' + 24']. Scaling indicates areas of from 45 to 47 feet.

Susan R. Lagville
Housing Help, Inc.
Matinecock Court

June 15, 1995

10. The five (5) foot concrete sidewalks depicted along head-in parking areas are going to be affected by bumper overhangs, which effectively reduces the sidewalks from five (5) to three (3) feet. Will this be adequate?

11. Provide solid masonry dumpster enclosures, with chain link gates.

12. Are we correct in assuming that the half blackened circles on the site plan are the light poles?

13. The New York State Uniform Fire Prevention and Building Code requires that "Buildings other than one- and two-family dwellings shall be 100 feet or less from a street, road or driveway so as to be accessible to the fire department and emergency service apparatus" [Section 705.1(b)].

    a) The traffic circle appears too tight for maneuverability of fire trucks, and might cause problems of access to all the units in the southwest portion of the site.

    b) The emergency access from Pulaski Road needs a clean shot into the internal road system, while as depicted it conflicts with a parking space.

    c) The site's southwesterly most unit is clearly within one hundred (100') feet of Pulaski Road. However any emergency calls for this unit would have to be specific to stay on Pulaski Road. This could be a problem.

    d) The westerly most units of the two Type 4 groupings perpendicular to the westerly property line are both more than one-hundred (100) feet to the nearest driveway.

14. The western most unit on the site (closest the recharge basin) is extremely isolated, and might be better sited if the units to its east were shifted southward.

15. Additional parking might be provided in the northwest portion of the site by the sewage treatment plant. How close to the plant and to the leaching fields can paved and unpaved parking locate?

Susan R. Lagville
Housing Help, Inc.
Matinecock Court

June 15, 1995

16. If units are going to be removed, the following approaches are suggested for further investigation on your part.

    a) Remove the Type 3 block behind the community building. This accomplishes three (3) things. First, it removes those dwelling units that are closest to the LILCO substation. Second, it frees up a block of land for additional parking. Third, this additional parking can service the community building. [This specific approach conflicts with the first recommendation of the attached memo dated June 13, 1995]. Another alternative might be to relocate the drive into the site to the north side of the community building, and provide a drive along the northerly property line.

    b) Remove and relocate some of the units in the south-central portion of the site between Phase I and Phase IV. This would allow for continuous circular traffic flow throughout the entire of Matinecock Court, and might help in providing fire fighting access.

    c) Remove the units identified in 13c, 13d, and 14 above.

17. It appears that some of the dwelling units are within twenty-five (25) feet of one another.

18. Show the maintenance access to the recharge basin.

As previously indicated, if you have any questions, or wish to discuss any aspects of the plan, please do not hesitate to call.

Very truly yours,

Kenneth D. Fine

Kenneth D. Fine, Planner

for Richard Machtay
Director of Planning

KDF:lc
Enc.
cc: Land Design Associates

HUNTINGTON TOWN PLANNING DEPARTMENT

Intra-Office Memorandum

June 13, 1995

To: Kenneth Fine, Planner

From: Peter Rubano, Planner PR

Re: Matinecock Court

After preliminary analysis of this proposed development, I have these comments:

1. The community building and the large playground should be relocated to the center of the site, where it would not only be more accessible to the residents, but would also provide a focus for this community. In its present location, the building is isolated from the residences by the entrance roadway. Pedestrians would be at risk with this design.

   The entrance roadway could be relocated to the northerly boundary of the site. Landscaping along each side would provide a buffer between the residences and the LILCO substation to the north.

2. There are a few groups of parking spaces near the main entrance from which cars would have to back into the entrance roadway. If such a high-density development would permit it, these spaces should be relocated or redesigned.

3. There are seven laundry rooms shown on the plan to serve the twenty-one buildings. If construction funding permits, it would be better if each building, or every two, could have a small laundry room. The present plan requires quite a schlep for the residents of some of the units. Care must be taken that, for safety reasons, laundry rooms are not located in basements, and that any external walkways are well-lighted, and not obscured by vegetation.

4. The plan shows seven dumpsters. This is not adequate. Provision for recycling containers have to be provided also. Refuse/recycling stations need to be better provided for in the plan.

5. The bus stop enclosure on Pulaski Road is located too near the intersection of Elwood Road. Cars turning right from Elwood Road onto Pulaski Road do not have enough vision of a bus stopped here, especially if there is a landscaped berm on the edges of the property. The bus stop should be farther west.

Also, a bus pullout should be considered. Maybe this could be located near the emergency entrance, where there is a break in the berm.

6. The Suffolk County Department of Public Works should be contacted for the need for widening of Elwood and Pulaski Roads, and for the need for radius widening at their intersection.

7. If there are any constraints to construction due to funding or other requirements (such as HUD requirements) that would effect our review, we need to have that information.

cc: Richard Machtay, Planning Director
John Condon, Deputy Planning Director

APPENDIX B: LEVEL OF SERVICE DESCRIPTIONS

I. Signalized Intersections

II. Unsignalized Intersection

I. Signalized Intersections

LEVEL OF SERVICE
SIGNALIZED INTERSECTION

Level of service for signalized intersection is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experience by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay (for signalized intersections).

Level of service criteria for signalized intersections are determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Level of Service A	< 10.0 sec./veh.
Level of Service B	> 10.0 and < 20.0 sec./veh.
Level of Service C	> 20.0 and < 35.0 sec./veh.
Level of Service D	> 35.0 and < 55.0 sec./veh.
Level of Service E	> 55.0 and < 80.0 sec./veh.
Level of Service F	> 80.0 sec./veh.

Level of Service-A describes operations with a very low control delay. This occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service-B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service-C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of Service-D at this level the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume to capacity ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service-E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences.

Level of Service-F is considered unacceptable to most drivers. This condition often occurs with oversaturations, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

II. Unsignalized Intersection

LEVEL OF SERVICE
TWO WAY STOP CONTROLLED INTERSECTIONS

The level of service and capacity of a two way stop controlled (TWSC) intersection are the criteria by which the quality of traffic service is measured. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgement in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10 sec./veh.
Level of Service B	> 10 and $\leq$ 15 sec./veh.
Level of Service C	> 15 and $\leq$ 25 sec./veh.
Level of Service D	> 25 and $\leq$ 35 sec./veh.
Level of Service E	> 35 and $\leq$ 50 sec./veh.
Level of Service F	> 50 sec./veh.

APPENDIX C: TRAFFIC VOLUME AND TRIP DISTRIBUTION/ASSIGNMENT SPREADSHEETS

RMS Engineering

AM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

GROWTH FACTOR: 1.00%
NO. OF YEARS: 2
GROWTH RATE: 1.030

LOCATION	DIR	MVMT	EXISTING VOLUME	AMBIENT NO BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	83	86
		THROUGH	430	443
		RIGHT	44	46
	SB	LEFT	57	59
		THROUGH	402	415
		RIGHT	140	145
	EB	LEFT	135	140
		THROUGH	320	330
		RIGHT	58	60
	WB	LEFT	82	85
		THROUGH	528	544
		RIGHT	100	103
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	12	13
		THROUGH	39	41
		RIGHT	16	17
	SB	LEFT	63	65
		THROUGH	48	50
		RIGHT	31	32
	EB	LEFT	16	17
		THROUGH	434	448
		RIGHT	2	3
	WB	LEFT	21	22
		THROUGH	674	695
		RIGHT	46	48
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0
		THROUGH	0	0
		RIGHT	0	0
	SB	LEFT	0	0
		THROUGH	0	0
		RIGHT	0	0
	EB	LEFT	0	0
		THROUGH	512	528
		RIGHT	0	0
	WB	LEFT	0	0
		THROUGH	740	763
		RIGHT	0	0

RMS Engineering

AM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

OTHER
PLANNED
PROJECTS

NO PLANNED PROJECTS		SUBTOTAL TRAFFIC GENERATED BY OTHER PROJECTS
	VOL	
ENTER		
EXIT		
TOTAL		

LOCATION	DIR	MVMT	%EN	%EX	1 VOL	SUBTOTAL VOL
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0

RMS Engineering

AM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

LOCATION	DIR	MVMT	AMBIENT NO BUILD VOLUME	SUBTOTAL TRAFFIC GENERATED BY OTHER PROJECTS	SUBTOTAL NO BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	86	0	86
		THROUGH	443	0	443
		RIGHT	46	0	46
	SB	LEFT	59	0	59
		THROUGH	415	0	415
		RIGHT	145	0	145
	EB	LEFT	140	0	140
		THROUGH	330	0	330
		RIGHT	60	0	60
	WB	LEFT	85	0	85
		THROUGH	544	0	544
		RIGHT	103	0	103
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	13	0	13
		THROUGH	41	0	41
		RIGHT	17	0	17
	SB	LEFT	65	0	65
		THROUGH	50	0	50
		RIGHT	32	0	32
	EB	LEFT	17	0	17
		THROUGH	448	0	448
		RIGHT	3	0	3
	WB	LEFT	22	0	22
		THROUGH	695	0	695
		RIGHT	48	0	48
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	EB	LEFT	0	0	0
		THROUGH	528	0	528
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	763	0	763
		RIGHT	0	0	0

RMS Engineering

AM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

	155 UNIT GARDEN APTS.	SUBTOTAL TRAFFIC GENERATED
	VOL	
ENTER	15	
EXIT	69	
TOTAL	84	

LOCATION	DIR	MVMT	%EN	%EX	1 VOL	SUBTOTAL VOL
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	5		1	1
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT	10		2	2
	EB	LEFT		13	9	9
		THROUGH		34	23	23
		RIGHT		5	3	3
	WB	LEFT			0	0
		THROUGH	34		5	5
		RIGHT			0	0
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT	1		0	0
	SB	LEFT	4		1	1
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH	46		7	7
		RIGHT			0	0
	WB	LEFT		1	1	1
		THROUGH		44	30	30
		RIGHT		3	2	2
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT		52	36	36
		THROUGH			0	0
		RIGHT		48	33	33
	EB	LEFT	51		8	8
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT	49		7	7

RMS Engineering

AM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

LOCATION	DIR	MVMT	SUBTOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	86	1	87
		THROUGH	443	0	443
		RIGHT	46	0	46
	SB	LEFT	59	0	59
		THROUGH	415	0	415
		RIGHT	145	2	147
	EB	LEFT	140	9	149
		THROUGH	330	23	353
		RIGHT	60	3	63
	WB	LEFT	85	0	85
		THROUGH	544	5	549
		RIGHT	103	0	103
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	13	0	13
		THROUGH	41	0	41
		RIGHT	17	0	17
	SB	LEFT	65	1	66
		THROUGH	50	0	50
		RIGHT	32	0	32
	EB	LEFT	17	0	17
		THROUGH	448	7	455
		RIGHT	3	0	3
	WB	LEFT	22	1	23
		THROUGH	695	30	725
		RIGHT	48	2	50
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	36	36
		THROUGH	0	0	0
		RIGHT	0	33	33
	EB	LEFT	0	8	8
		THROUGH	528	0	528
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	763	0	763
		RIGHT	0	7	7

RMS Engineering

PM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

GROWTH FACTOR: 1.00%
NO. OF YEARS: 2
GROWTH RATE: 1.030

LOCATION	DIR	MVMT	EXISTING VOLUME	AMBIENT NO BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	77	80
		THROUGH	662	682
		RIGHT	50	52
	SB	LEFT	84	87
		THROUGH	399	411
		RIGHT	110	114
	EB	LEFT	232	239
		THROUGH	595	613
		RIGHT	68	71
	WB	LEFT	77	80
		THROUGH	381	393
		RIGHT	118	122
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	16	17
		THROUGH	86	89
		RIGHT	47	49
	SB	LEFT	57	59
		THROUGH	58	60
		RIGHT	20	21
	EB	LEFT	29	30
		THROUGH	791	815
		RIGHT	7	8
	WB	LEFT	19	20
		THROUGH	543	560
		RIGHT	7	8
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0
		THROUGH	0	0
		RIGHT	0	0
	SB	LEFT	0	0
		THROUGH	0	0
		RIGHT	0	0
	EB	LEFT	0	0
		THROUGH	894	921
		RIGHT	0	0
	WB	LEFT	0	0
		THROUGH	567	585
		RIGHT	0	0

RMS Engineering

PM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

OTHER
PLANNED
PROJECTS

NO PLANNED PROJECTS		
		VOL
	ENTER	
	EXIT	
	TOTAL	

SUBTOTAL TRAFFIC GENERATED BY OTHER PROJECTS

LOCATION	DIR	MVMT	%EN	%EX	1 VOL	SUBTOTAL VOL
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0

RMS Engineering

PM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

LOCATION	DIR	MVMT	AMBIENT NO BUILD VOLUME	SUBTOTAL TRAFFIC GENERATED BY OTHER PROJECTS	SUBTOTAL NO BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	80	0	80
		THROUGH	682	0	682
		RIGHT	52	0	52
	SB	LEFT	87	0	87
		THROUGH	411	0	411
		RIGHT	114	0	114
	EB	LEFT	239	0	239
		THROUGH	613	0	613
		RIGHT	71	0	71
	WB	LEFT	80	0	80
		THROUGH	393	0	393
		RIGHT	122	0	122
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	17	0	17
		THROUGH	89	0	89
		RIGHT	49	0	49
	SB	LEFT	59	0	59
		THROUGH	60	0	60
		RIGHT	21	0	21
	EB	LEFT	30	0	30
		THROUGH	815	0	815
		RIGHT	8	0	8
	WB	LEFT	20	0	20
		THROUGH	560	0	560
		RIGHT	8	0	8
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	EB	LEFT	0	0	0
		THROUGH	921	0	921
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	585	0	585
		RIGHT	0	0	0

RMS Engineering

PM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

	155 UNIT GARDEN APTS.
	VOL
ENTER	72
EXIT	37
TOTAL	109

SUBTOTAL TRAFFIC GENERATED

LOCATION	DIR	MVMT	%EN	%EX	1 VOL	SUBTOTAL VOL
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	5		4	4
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT	10		7	7
	EB	LEFT		13	5	5
		THROUGH		34	13	13
		RIGHT		5	2	2
	WB	LEFT			0	0
		THROUGH	34		24	24
		RIGHT			0	0
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT	1		1	1
	SB	LEFT	4		3	3
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH	46		33	33
		RIGHT			0	0
	WB	LEFT		1	0	0
		THROUGH		44	16	16
		RIGHT		3	1	1
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT		52	19	19
		THROUGH			0	0
		RIGHT		48	18	18
	EB	LEFT	51		37	37
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT	49		35	35

RMS Engineering

PM PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

LOCATION	DIR	MVMT	SUBTOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	80	4	84
		THROUGH	682	0	682
		RIGHT	52	0	52
	SB	LEFT	87	0	87
		THROUGH	411	0	411
		RIGHT	114	7	121
	EB	LEFT	239	5	244
		THROUGH	613	13	626
		RIGHT	71	2	73
	WB	LEFT	80	0	80
		THROUGH	393	24	417
		RIGHT	122	0	122
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	17	0	17
		THROUGH	89	0	89
		RIGHT	49	1	50
	SB	LEFT	59	3	62
		THROUGH	60	0	60
		RIGHT	21	0	21
	EB	LEFT	30	0	30
		THROUGH	815	33	848
		RIGHT	8	0	8
	WB	LEFT	20	0	20
		THROUGH	560	16	576
		RIGHT	8	1	9
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	19	19
		THROUGH	0	0	0
		RIGHT	0	18	18
	EB	LEFT	0	37	37
		THROUGH	921	0	921
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	585	0	585
		RIGHT	0	35	35

RMS Engineering

SAT PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

GROWTH FACTOR:	1.00%
NO. OF YEARS:	2
GROWTH RATE:	1.030

LOCATION	DIR	MVMT	EXISTING VOLUME	AMBIENT NO BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	135	140
		THROUGH	602	621
		RIGHT	77	80
	SB	LEFT	58	60
		THROUGH	484	499
		RIGHT	166	171
	EB	LEFT	157	162
		THROUGH	436	450
		RIGHT	61	63
	WB	LEFT	90	93
		THROUGH	359	370
		RIGHT	78	81
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	16	17
		THROUGH	48	50
		RIGHT	35	37
	SB	LEFT	52	54
		THROUGH	59	61
		RIGHT	23	24
	EB	LEFT	22	23
		THROUGH	567	585
		RIGHT	2	3
	WB	LEFT	19	20
		THROUGH	640	660
		RIGHT	42	44
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0
		THROUGH	0	0
		RIGHT	0	0
	SB	LEFT	0	0
		THROUGH	0	0
		RIGHT	0	0
	EB	LEFT	0	0
		THROUGH	653	673
		RIGHT	0	0
	WB	LEFT	0	0
		THROUGH	699	720
		RIGHT	0	0

RMS Engineering

SAT PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

OTHER
PLANNED
PROJECTS

NO PLANNED PROJECTS			SUBTOTAL TRAFFIC GENERATED BY OTHER PROJECTS
		VOL	
	ENTER		
	EXIT		
	TOTAL		

LOCATION	DIR	MVMT	%EN	%EX	1 VOL	SUBTOTAL VOL
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0

RMS Engineering

SAT PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

LOCATION	DIR	MVMT	AMBIENT NO BUILD VOLUME	SUBTOTAL TRAFFIC GENERATED BY OTHER PROJECTS	SUBTOTAL NO BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	140	0	140
		THROUGH	621	0	621
		RIGHT	80	0	80
	SB	LEFT	60	0	60
		THROUGH	499	0	499
		RIGHT	171	0	171
	EB	LEFT	162	0	162
		THROUGH	450	0	450
		RIGHT	63	0	63
	WB	LEFT	93	0	93
		THROUGH	370	0	370
		RIGHT	81	0	81
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	17	0	17
		THROUGH	50	0	50
		RIGHT	37	0	37
	SB	LEFT	54	0	54
		THROUGH	61	0	61
		RIGHT	24	0	24
	EB	LEFT	23	0	23
		THROUGH	585	0	585
		RIGHT	3	0	3
	WB	LEFT	20	0	20
		THROUGH	660	0	660
		RIGHT	44	0	44
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	EB	LEFT	0	0	0
		THROUGH	673	0	673
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	720	0	720
		RIGHT	0	0	0

RMS Engineering

SAT PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

	155 UNIT GARDEN APTS.
	VOL
ENTER	60
EXIT	56
TOTAL	116

SUBTOTAL TRAFFIC GENERATED

LOCATION	DIR	MVMT	%EN	%EX	1 VOL	SUBTOTAL VOL
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	5		3	3
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT			0	0
		THROUGH			0	0
		RIGHT	10		6	6
	EB	LEFT		13	7	7
		THROUGH		34	19	19
		RIGHT		5	3	3
	WB	LEFT			0	0
		THROUGH	34		20	20
		RIGHT			0	0
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT	1		1	1
	SB	LEFT	4		2	2
		THROUGH			0	0
		RIGHT			0	0
	EB	LEFT			0	0
		THROUGH	46		28	28
		RIGHT			0	0
	WB	LEFT		1	1	1
		THROUGH		44	25	25
		RIGHT		3	2	2
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT			0	0
		THROUGH			0	0
		RIGHT			0	0
	SB	LEFT		52	29	29
		THROUGH			0	0
		RIGHT		48	27	27
	EB	LEFT	51		31	31
		THROUGH			0	0
		RIGHT			0	0
	WB	LEFT			0	0
		THROUGH			0	0
		RIGHT	49		29	29

RMS Engineering

SAT PEAK HOUR
Project Name: Housing Help
RMS Project No. 2003-080

LOCATION	DIR	MVMT	SUBTOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
PULASKI ROAD (CR 11) AT ELWOOD ROAD (CR 10) 1	NB	LEFT	140	3	143
		THROUGH	621	0	621
		RIGHT	80	0	80
	SB	LEFT	60	0	60
		THROUGH	499	0	499
		RIGHT	171	6	177
	EB	LEFT	162	7	169
		THROUGH	450	19	469
		RIGHT	63	3	66
	WB	LEFT	93	0	93
		THROUGH	370	20	390
		RIGHT	81	0	81
PULASKI ROAD (CR 11) AT STONY HOLLOW ROAD 2	NB	LEFT	17	0	17
		THROUGH	50	0	50
		RIGHT	37	1	38
	SB	LEFT	54	2	56
		THROUGH	61	0	61
		RIGHT	24	0	24
	EB	LEFT	23	0	23
		THROUGH	585	28	613
		RIGHT	3	0	3
	WB	LEFT	20	1	21
		THROUGH	660	25	685
		RIGHT	44	2	46
PULASKI ROAD (CR 11) AT SITE ENTRANCE 3	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	29	29
		THROUGH	0	0	0
		RIGHT	0	27	27
	EB	LEFT	0	31	31
		THROUGH	673	0	673
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	720	0	720
		RIGHT	0	29	29

APPENDIX D: CAPACITY ANALYSIS WORKSHEETS – EXISTING CONDITIONS

I. Signalized Intersections

I. Signalized Intersections

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: EXISTING AM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2003
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	135	320	58	82	528	100	83	430	44	57	402	140
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
	Right					WB	Right				
Green		6.5	33.7					34.7			
Yellow		3.0	3.8					3.8			
All Red		1.5	1.5					1.5			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	227	1593	0.63	0.52	24.0	C		
T	963	1863	0.35	0.52	13.1	B	15.7	B
R	736	1425	0.08	0.52	11.0	B		
Westbound								
L	381	967	0.23	0.39	19.6	B		
TR	717	1818	0.94	0.39	48.5	D	45.2	D
Northbound								
L	119	294	0.76	0.41	48.2	D		
TR	696	1715	0.75	0.41	27.3	C	30.4	C
Southbound								
L	160	394	0.38	0.41	20.3	C		
TR	702	1731	0.83	0.41	32.3	C	31.2	C

Intersection Delay = 31.9 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: EXISTING AM PEAK
Intersection: CR 11 @ CR 10
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2003
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	135	320	58	82	528	100	83	430	44	57	402	140
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93
15 Vol	36	85	15	22	142	27	23	118	12	15	108	38
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	144	340	62	88	676		91	521		61	583	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.160			0.092			0.259	
Peds Bikes		0			0			0			0	
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
t Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		6.5	33.7					34.7			
Yellow		3.0	3.8					3.8			
All Red		1.5	1.5					1.5			

Cycle Length: 90.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	135	320	58	82	528	100	83	430	44	57	402	140
PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93
Adj flow	144	340	62	88	568	108	91	473	48	61	432	151
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	144	340	62	88	676		91	521		61	583	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.160			0.092			0.259	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.976			0.986			0.961	
fLT	0.950	1.000		0.556	1.000		0.175	1.000		0.235	1.000	
Sec.	0.105											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000			1.000			1.000	
S	1593	1863	1425	967	1818		294	1715		394	1731	
Sec.	176											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		144	1593	# 0.09	0.092	147	0.98
Perm		0	176	0.00	0.424	80	0.00
Left	L	144			0.52	227	0.63
Prot							
Perm							
Thru	T	340	1863	0.18	0.52	963	0.35
Right	R	62	1425	0.04	0.52	736	0.08
Westbound							
Prot							
Perm							
Left	L	88	967	0.09	0.39	381	0.23
Prot							
Perm							
Thru	TR	676	1818	# 0.37	0.39	717	0.94
Right							
Northbound							
Prot							
Perm							
Left	L	91	294	0.31	0.41	119	0.76
Prot							
Perm							
Thru	TR	521	1715	0.30	0.41	696	0.75
Right							
Southbound							
Prot							
Perm							
Left	L	61	394	0.15	0.41	160	0.38
Prot							
Perm							
Thru	TR	583	1731	# 0.34	0.41	702	0.83
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.80
Total lost time per cycle, L = 10.50 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.90

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.63	0.52	18.3	1.000	227	0.21	5.7	0.0	24.0	C		
T	0.35	0.52	12.9	1.000	963	0.11	0.2	0.0	13.1	B	15.7	B
R	0.08	0.52	11.0	1.000	736	0.11	0.0	0.0	11.0	B		
Westbound												
L	0.23	0.39	18.2	1.000	381	0.50	1.4	0.0	19.6	B		
TR	0.94	0.39	26.3	1.000	717	0.50	22.2	0.0	48.5	D	45.2	D
Northbound												
L	0.76	0.41	23.0	1.000	119	0.32	25.1	0.0	48.2	D		
	0.75	0.41	22.8	1.000	696	0.30	4.5	0.0	27.3	C	30.4	C
Southbound												
L	0.38	0.41	18.8	1.000	160	0.11	1.5	0.0	20.3	C		

TR	0.83	0.41	24.0	1.000	702	0.37	8.3	0.0	32.3	C	31.2	C

Intersection delay = 31.9 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	90.0 sec				
Total actual green time for LT lane group, G (s)		44.7	33.7	34.7	34.7
Effective permitted green time for LT lane group, g(s)		38.2	35.5	36.5	36.5
Opposing effective green time, go (s)		35.5	46.5	36.5	36.5
Number of lanes in LT lane group, N		1	1	1	1
Number of lanes in opposing approach, No		1	1	1	1
Adjusted LT flow rate, VLT (veh/h)		144	88	91	61
Proportion of LT in LT lane group, PLT		1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo		0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)		676	340	583	521
Lost time for LT lane group, tL		3.50	3.50	3.50	3.50
Computation					
LT volume per cycle, LTC=VLTC/3600		3.60	2.20	2.28	1.53
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		16.90	8.50	14.57	13.02
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.61	0.48	0.59	0.59
gq, (see Exhibit C16-4,5,6,7,8)		32.78	0.00	22.13	18.29
gu=g-gq if gq>=gf, or = g-gf if gq<gf		5.42	35.50	14.37	18.21
Max(gq-gf)/2,0)		16.39	0.00	11.06	9.15
Pto=1-PLTo		1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)		2.45	1.80	2.25	2.12
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.10	0.11	0.11	0.11
gdiff=max(gq-gf,0)		0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.10	0.56	0.18	0.23
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)], (fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.105	0.556	0.175	0.235

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	90.0 sec				
Total actual green time for LT lane group, G (s)					
Effective permitted green time for LT lane group, g(s)					
Opposing effective green time, go (s)					
Number of lanes in LT lane group, N					
Number of lanes in opposing approach, No					

Adjusted LT flow rate, VLT (veh/h)	0.000	0.000	0.000	0.000
Proportion of LT in LT lane group, PLT				
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	90.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		144			
v/c ratio from Capacity Worksheet, X		0.63			
Protected phase effective green interval, g (s)		8.3			
Opposing queue effective green interval, gq		32.78			
Unopposed green interval, gu		5.42			
Red time r=(C-g-gq-gu)		43.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.04			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.34			
XPerm		0.82			
XProt		0.56			
Case		1			
Queue at beginning of green arrow, Qa		1.74			
Queue at beginning of unsaturated green, Qu		1.31			
Residual queue, Qr		0.00			
Uniform Delay, d1		18.3			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

pr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 31.9 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	144	340	62	88	676		91	521		61	583	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
[illegible]	429	1863	1425	967	1818		294	1715		394	1731	
[illegible]apacity	227	963	736	381	717		119	696		160	702	
Flow Ratio	0.34	0.18	0.04	0.09	0.37		0.31	0.30		0.15	0.34	
v/c Ratio	0.63	0.35	0.08	0.23	0.94		0.76	0.75		0.38	0.83	
Grn Ratio	0.52	0.52	0.52	0.39	0.39		0.41	0.41		0.41	0.41	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	1.8	5.0	0.8	1.5	16.3		2.0	11.1		1.1	13.1	
kB	0.3	0.7	0.6	0.6	0.9		0.2	0.6		0.2	0.6	
Q2	0.5	0.4	0.1	0.2	6.6		0.5	1.5		0.1	2.4	
Q Average	2.3	5.4	0.8	1.6	22.8		2.5	12.7		1.2	15.4	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	0.8	0.1	0.2	0.4	5.7		0.6	1.1		0.3	0.4	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.2		1.2	1.2	
BOQ	2.8	6.4	1.0	2.1	27.4		3.0	14.8		1.5	18.0	
QSRatio	0.9	0.2	0.3	0.5	6.9		0.7	1.2		0.4	0.5	
85th Percentile Output:												
fB%	1.6	1.6	1.6	1.6	1.4		1.6	1.5		1.6	1.5	
BOQ	3.6	8.4	1.3	2.6	32.1		3.9	18.9		1.9	22.8	
QSRatio	1.2	0.2	0.3	0.6	8.0		1.0	1.6		0.5	0.6	
90th Percentile Output:												
fB%	1.8	1.7	1.8	1.9	1.5		1.8	1.6		1.8	1.6	
	4.1	9.2	1.5	3.1	34.4		4.4	20.4		2.2	24.4	
[illegible]ratio	1.4	0.2	0.4	0.7	8.6		1.1	1.7		0.5	0.6	
95th Percentile Output:												
fB%	2.0	1.9	2.1	2.3	1.6		2.0	1.8		2.1	1.8	
BOQ	4.7	10.5	1.7	3.8	36.8		5.1	22.8		2.5	27.1	
QSRatio	1.6	0.3	0.4	0.8	9.2		1.3	1.9		0.6	0.7	
98th Percentile Output:												
fB%	2.5	2.4	2.6	2.8	1.7		2.5	2.1		2.6	2.0	
BOQ	5.9	12.7	2.2	4.6	39.2		6.3	26.3		3.2	30.9	
QSRatio	2.0	0.3	0.6	1.0	9.8		1.6	2.2		0.8	0.8	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: EXISTING PM PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2003
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	232	595	68	77	381	118	77	662	50	84	399	110
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
S	Right					WB	Right				
Green		6.5	35.7					42.7			
Yellow		3.5	3.8					3.8			
All Red		1.0	1.5					1.5			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	206	1593	1.18	0.49	145.5	F		
T	904	1863	0.69	0.49	22.3	C	53.5	D
R	691	1425	0.10	0.49	14.0	B		
Westbound								
L	182	486	0.50	0.38	33.5	C		
TR	674	1797	0.87	0.38	43.4	D	42.1	D
Northbound								
L	178	401	0.47	0.44	21.4	C		
TR	765	1720	1.00	0.44	60.6	E	56.8	E
Southbound								
L	72	151	1.26	0.44	220.3	F		
TR	775	1742	0.71	0.44	25.7	C	53.2	D

Intersection Delay = 51.9 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: EXISTING PM PEAK
Intersection: CR 11 @ CR 10
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2003
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	232	595	68	77	381	118	77	662	50	84	399	110
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92
P 15 Vol	61	157	18	23	112	35	21	178	13	23	108	30
n Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	244	626	72	91	587		83	766		91	554	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.237			0.070			0.217	
Peds Bikes		0			0			0			0	
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
: Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
actor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4		5	6	7	8
Left	A	P			NB Left	A			
Thru	A	P			Thru	A			
Right	A	P			Right	A			
Peds					Peds				
WB Left		P			SB Left	A			
Thru		P			Thru	A			
Right		P			Right	A			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	6.5	35.7				42.7			
Yellow	3.5	3.8				3.8			
All Red	1.0	1.5				1.5			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	232	595	68	77	381	118	77	662	50	84	399	110
PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92
Adj flow	244	626	72	91	448	139	83	712	54	91	434	120
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	244	626	72	91	587		83	766		91	554	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.237			0.070			0.217	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.964			0.989			0.968	
fLT	0.950	1.000		0.280	1.000		0.239	1.000		0.090	1.000	
Sec.	0.110											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
[illegible]		1.000	1.000		1.000			1.000			1.000	
S[illegible]	1593	1863	1425	486	1797		401	1720		151	1742	
Sec.	184											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		132	1593	# 0.08	0.083	132	1.00
Perm		112	184	# 0.61	0.402	74	1.51
Left	L	244			0.49	206	1.18
Prot							
Perm							
Thru	T	626	1863	0.34	0.49	904	0.69
Right	R	72	1425	0.05	0.49	691	0.10
Westbound							
Prot							
Perm							
Left	L	91	486	0.19	0.38	182	0.50
Prot							
Perm							
Thru	TR	587	1797	0.33	0.38	674	0.87
Right							
Northbound							
Prot							
Perm							
Left	L	83	401	0.21	0.44	178	0.47
Prot							
Perm							
Thru	TR	766	1720	0.45	0.44	765	1.00
Right							
Southbound							
Prot							
Perm							
Left	L	91	151	# 0.60	0.44	72	1.26
Prot							
Perm							
Thru	TR	554	1742	0.32	0.44	775	0.71
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 1.29
Total lost time per cycle, L = 7.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 1.39

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	1.18	0.49	24.1	1.000	206	0.50	121.4	0.0	145.5	F		
T	0.69	0.49	20.0	1.000	904	0.26	2.3	0.0	22.3	C	53.5	D
R	0.10	0.49	14.0	1.000	691	0.11	0.1	0.0	14.0	B		
Westbound												
L	0.50	0.38	24.0	1.000	182	0.50	9.5	0.0	33.5	C		
TR	0.87	0.38	29.0	1.000	674	0.50	14.4	0.0	43.4	D	42.1	D
Northbound												
L	0.47	0.44	19.4	1.000	178	0.11	1.9	0.0	21.4	C		
	1.00	0.44	27.8	1.000	765	0.50	32.9	0.0	60.6	E	56.8	E
Southbound												
L	1.26	0.44	27.8	1.000	72	0.50	192.6	0.0	220.3	F		

TR	0.71	0.44	22.6	1.000	775	0.28	3.2	0.0	25.7	C	53.2	D

Intersection delay = 51.9 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)		46.7	35.7	42.7	42.7
Effective permitted green time for LT lane group, g(s)		40.2	37.5	44.5	44.5
Opposing effective green time, go (s)		37.5	48.5	44.5	44.5
Number of lanes in LT lane group, N		1	1	1	1
Number of lanes in opposing approach, No		1	1	1	1
Adjusted LT flow rate, VLT (veh/h)		244	91	83	91
Proportion of LT in LT lane group, PLT		1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo		0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)		587	626	554	766
Lost time for LT lane group, tL		3.50	3.50	3.50	3.50
Computation					
LT volume per cycle, LTC=VLTC/3600		6.78	2.53	2.31	2.53
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		16.31	17.39	15.39	21.28
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.63	0.51	0.56	0.56
gq, (see Exhibit C16-4,5,6,7,8)		30.25	12.96	21.18	37.62
gu=g-gq if gq>=gf, or = g-gf if gq<gf		9.95	24.54	23.32	6.88
n=Max(gq-gf)/2,0)		15.12	6.48	10.59	18.81
o=1-PLTo		1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)		2.26	2.34	2.19	2.67
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.10	0.11	0.09	0.09
gdiff=max(gq-gf,0)		0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.11	0.28	0.24	0.09
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.110	0.280	0.239	0.090

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)					
Effective permitted green time for LT lane group, g(s)					
Opposing effective green time, go (s)					
Number of lanes in LT lane group, N					
Number of lanes in opposing approach, No					

Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT	0.000	0.000	0.000	0.000
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

	EB	WB	NB	SB
Permitted Left Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	100.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		244			
v/c ratio from Capacity Worksheet, X		1.18			
Protected phase effective green interval, g (s)		8.3			
Opposing queue effective green interval, gq		30.25			
Unopposed green interval, gu		9.95			
Red time r=(C-g-gq-gu)		51.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.06			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.21			
XPerm		1.12			
XProt		0.93			
Case		3			
Queue at beginning of green arrow, Qa		3.19			
Queue at beginning of unsaturated green, Qu		1.73			
Residual queue, Qr		0.25			
Uniform Delay, d1		24.1			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 51.9 sec/veh Intersection LOS D

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR			
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0			
Flow Rate	244	626	72	91	587		83	766		91	554			
So	1900	1900	1900	1900	1900		1900	1900		1900	1900			
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0		
SL	425	1863	1425	486	1797		401	1720		151	1742			
Capacity	206	904	691	182	674		178	765		72	775			
Flow Ratio	0.57	0.34	0.05	0.19	0.33		0.21	0.45		0.60	0.32			
v/c Ratio	1.18	0.69	0.10	0.50	0.87		0.47	1.00		1.26	0.71			
Grn Ratio	0.49	0.49	0.49	0.38	0.38		0.44	0.44		0.44	0.44			
I Factor		1.000			1.000			1.000			1.000			
AT or PVG	3	3	3	3	3		3	3		3	3			
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00			
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00			
Q1	3.8	13.5	1.1	1.9	15.1		1.6	21.3		2.5	12.5			
kB	0.3	0.7	0.6	0.4	0.9		0.3	0.6		0.1	0.6			
Q2	6.2	1.5	0.1	0.4	4.5		0.2	7.8		2.9	1.5			
Q Average	10.0	15.0	1.2	2.3	19.6		1.8	29.1		5.5	14.0			
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0			
Q Storage	75	1000	100	115	100		100	300		100	1000			
Q S Ratio	3.3	0.4	0.3	0.5	4.9		0.5	2.4		1.4	0.4			
70th Percentile Output:														
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.1		1.2	1.2			
BOQ	11.7	17.5	1.4	2.9	23.6		2.2	33.4		6.5	16.4			
QSRatio	3.9	0.4	0.3	0.6	5.9		0.5	2.8		1.6	0.4			
85th Percentile Output:														
fB%	1.5	1.5	1.6	1.6	1.4		1.6	1.4		1.6	1.5			
BOQ	15.1	22.2	1.8	3.7	27.6		2.9	41.1		8.5	20.9			
QSRatio	5.0	0.6	0.5	0.8	6.9		0.7	3.4		2.1	0.5			
90th Percentile Output:														
fB%	1.6	1.6	1.8	1.8	1.5		1.8	1.5		1.7	1.6			
BOQ	16.4	23.8	2.0	4.2	29.6		3.2	43.4		9.3	22.4			
QSRatio	5.5	0.6	0.5	0.9	7.4		0.8	3.6		2.3	0.6			
95th Percentile Output:														
fB%	1.8	1.8	2.1	2.2	1.6		2.0	1.6		1.9	1.8			
BOQ	18.4	26.4	2.4	5.1	31.7		3.8	47.1		10.6	24.9			
QSRatio	6.1	0.7	0.6	1.1	7.9		0.9	3.9		2.7	0.6			
98th Percentile Output:														
fB%	2.2	2.0	2.6	2.6	1.7		2.6	1.8		2.4	2.0			
BOQ	21.6	30.2	3.0	6.1	33.9		4.7	52.5		12.9	28.6			
QSRatio	7.2	0.8	0.8	1.3	8.5		1.2	4.4		3.2	0.7			

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: EXISTING SAT PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2003
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	157	436	61	90	359	78	135	602	77	58	484	166
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
	Right					WB	Right				
Green		7.5	17.7					29.7			
Yellow		3.0	3.8					3.8			
All Red		1.5	1.5					1.5			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	315	1593	0.55	0.45	16.6	B		
T	838	1863	0.57	0.45	15.2	B	15.2	B
R	641	1425	0.10	0.45	11.2	B		
Westbound								
L	237	851	0.47	0.28	27.6	C		
TR	505	1813	1.08	0.28	89.0	F	78.5	E
Northbound								
L	103	214	1.44	0.45	262.3	F		
TR	769	1709	0.97	0.45	44.3	D	80.4	F
Southbound								
L	103	213	0.61	0.45	24.9	C		
TR	779	1732	0.91	0.45	32.1	C	31.5	C

Intersection Delay = 52.2 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst:	REB
Agency/Co.:	RMS ENGINEERING
Date Performed:	6/30/2003
Analysis Time Period:	EXISTING SAT PEAK
Intersection:	CR 11 @ CR 10
Area Type:	All other areas
Jurisdiction:	TOWN OF HUNTINGTON
Analysis Year:	2003

Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11) North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	157	436	61	90	359	78	135	602	77	58	484	166
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.91	0.91	0.91	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92
PK 15 Vol	43	120	17	28	112	24	37	165	21	16	132	45
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	173	479	67	112	546		148	747		63	706	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.178			0.114			0.255	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4		5	6	7	8
Left	A	P			NB Left	A			
Thru	A	P			Thru	A			
Right	A	P			Right	A			
Peds					Peds				
WB Left		P			SB Left	A			
Thru		P			Thru	A			
Right		P			Right	A			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	7.5	17.7				29.7			
Yellow	3.0	3.8				3.8			
All Red	1.5	1.5				1.5			

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	157	436	61	90	359	78	135	602	77	58	484	166
PHF	0.91	0.91	0.91	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92
Adj flow	173	479	67	112	449	97	148	662	85	63	526	180
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	173	479	67	112	546		148	747		63	706	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.178			0.114			0.255	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.973			0.983			0.962	
fLT	0.950	1.000		0.490	1.000		0.128	1.000		0.127	1.000	
Sec.	0.180											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
b		1.000	1.000		1.000			1.000			1.000	
s	1593	1863	1425	851	1813		214	1709		213	1732	
Sec.	302											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		173	1593	# 0.11	0.133	212	0.82
Perm		0	302	0.00	0.317	103	0.00
Left	L	173			0.45	315	0.55
Prot							
Perm							
Thru	T	479	1863	0.26	0.45	838	0.57
Right	R	67	1425	0.05	0.45	641	0.10
Westbound							
Prot							
Perm							
Left	L	112	851	0.13	0.28	237	0.47
Prot							
Perm							
Thru	TR	546	1813	# 0.30	0.28	505	1.08
Right							
Northbound							
Prot							
Perm							
Left	L	148	214	# 0.69	0.45	103	1.44
Prot							
Perm							
Thru	TR	747	1709	0.44	0.45	769	0.97
Right							
Southbound							
Prot							
Perm							
Left	L	63	213	0.30	0.45	103	0.61
Prot							
Perm							
Thru	TR	706	1732	0.41	0.45	779	0.91
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 1.10
Total lost time per cycle, L = 10.50 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 1.30

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.55	0.45	14.5	1.000	315	0.15	2.0	0.0	16.6	B		
T	0.57	0.45	14.3	1.000	838	0.17	0.9	0.0	15.2	B	15.2	B
R	0.10	0.45	11.1	1.000	641	0.11	0.1	0.0	11.2	B		
Westbound												
L	0.47	0.28	21.0	1.000	237	0.50	6.6	0.0	27.6	C		
TR	1.08	0.28	25.3	1.000	505	0.50	63.7	0.0	89.0	F	78.5	E
Northbound												
L	1.44	0.45	19.3	1.000	103	0.50	243.1	0.0	262.3	F		
[illegible]	0.97	0.45	18.8	1.000	769	0.48	25.5	0.0	44.3	D	80.4	F
Southbound												
L	0.61	0.45	14.6	1.000	103	0.20	10.2	0.0	24.9	C		

TR	0.91	0.45	17.9	1.000	779	0.43	14.3	0.0	32.1	C	31.5	C

Intersection delay = 52.2 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	29.7	17.7	29.7	29.7
Effective permitted green time for LT lane group, g(s)	22.2	19.5	31.5	31.5
Opposing effective green time, go (s)	19.5	31.5	31.5	31.5
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	1	1	1	1
Adjusted LT flow rate, VLT (veh/h)	173	112	148	63
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	546	479	706	747
Lost time for LT lane group, tL	3.50	3.50	3.50	3.50
Computation				
LT volume per cycle, LTC=VLTC/3600	3.36	2.18	2.88	1.23
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	10.62	9.31	13.73	14.52
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.72	0.55	0.55	0.55
gq, (see Exhibit C16-4,5,6,7,8)	18.20	0.00	21.35	23.81
gu=g-gq if gq>=gf, or = g-gf if gq<gf	4.00	19.50	10.15	7.69
n=Max(gq-gf)/2,0)	9.10	0.00	10.67	11.91
'o=1-PLTo	1.00	1.00	1.00	1.00
=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	2.17	2.04	2.52	2.62
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.18	0.21	0.13	0.13
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.18	0.49	0.13	0.13
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.180	0.490	0.128	0.127

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
( )sing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				

Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
[illegible] volume per cycle, LTC=VLTC/3600
[illegible]osing lane util. factor, fLUo 1.00 1.00 1.00 1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach [illegible]when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
[illegible]pedg				
[illegible]ective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v			173			
v/c ratio from Capacity Worksheet, X			0.55			
Protected phase effective green interval, g (s)			9.3			
Opposing queue effective green interval, gq			18.20			
Unopposed green interval, gu			4.00			
Red time r=(C-g-gq-gu)			38.5			
Arrival rate, qa=v/(3600(max[X,1.0]))			0.05			
Protected ph. departure rate, Sp=s/3600			0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)			0.47			
XPerm			0.57			
XProt			0.56			
Case			1			
Queue at beginning of green arrow, Qa			1.85			
Queue at beginning of unsaturated green, Qu			0.87			
Residual queue, Qr			0.00			
Uniform Delay, d1			14.5			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 52.2 sec/veh Intersection LOS D

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	173	479	67	112	546		148	747		63	706	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
SL	683	1863	1425	851	1813		214	1709		213	1732	
Capacity	315	838	641	237	505		103	769		103	779	
Flow Ratio	0.25	0.26	0.05	0.13	0.30		0.69	0.44		0.30	0.41	
v/c Ratio	0.55	0.57	0.10	0.47	1.08		1.44	0.97		0.61	0.91	
Grn Ratio	0.45	0.45	0.45	0.28	0.28		0.45	0.45		0.45	0.45	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	2.0	6.9	0.8	1.8	10.6		2.9	14.2		0.9	12.8	
kB	0.3	0.5	0.5	0.3	0.6		0.1	0.5		0.1	0.5	
Q2	0.3	0.7	0.1	0.3	9.4		6.1	5.6		0.2	3.6	
Q Average	2.3	7.6	0.8	2.1	20.0		8.9	19.8		1.1	16.3	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	0.8	0.2	0.2	0.5	5.0		2.2	1.7		0.3	0.4	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.2		1.2	1.2	
BOQ	2.8	9.0	1.0	2.7	24.1		10.6	23.0		1.4	19.0	
QSRatio	0.9	0.2	0.2	0.6	6.0		2.6	1.9		0.3	0.5	
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4		1.5	1.5		1.6	1.5	
BOQ	3.7	11.6	1.3	3.4	28.2		13.6	28.9		1.8	24.0	
QSRatio	1.2	0.3	0.3	0.7	7.0		3.4	2.4		0.5	0.6	
90th Percentile Output:												
fB%	1.8	1.7	1.8	1.8	1.5		1.7	1.5		1.8	1.6	
BOQ	4.1	12.7	1.4	3.9	30.2		14.8	30.7		2.0	25.7	
QSRatio	1.4	0.3	0.4	0.8	7.6		3.7	2.6		0.5	0.6	
95th Percentile Output:												
fB%	2.0	1.9	2.1	2.3	1.6		1.9	1.7		2.1	1.7	
BOQ	4.8	14.4	1.7	4.8	32.4		16.7	33.7		2.4	28.4	
QSRatio	1.6	0.4	0.4	1.0	8.1		4.2	2.8		0.6	0.7	
98th Percentile Output:												
fB%	2.5	2.3	2.6	2.7	1.7		2.2	1.9		2.6	2.0	
BOQ	5.9	17.2	2.1	5.7	34.6		19.7	38.0		3.0	32.4	
QSRatio	2.0	0.4	0.5	1.2	8.7		4.9	3.2		0.8	0.8	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: EXISTING AM PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2003
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR		LTR			LTR		
Volume	16	434	2	21	674	46	12	39	16	63	48	31
Lane Width	10.0	11.0		9.0	12.0		16.0			15.0		
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
S Right					WB	Right				
Green	66.2						12.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	326	432	0.06	0.76	3.2	A		
TR	1359	1799	0.43	0.76	5.0	A	4.9	A
Westbound								
L	510	675	0.05	0.76	3.0	A		
TR	1394	1845	0.64	0.76	7.4	A	7.3	A
Northbound								
LTR	292	1877	0.29	0.16	34.1	C	34.1	C
Southbound								
LTR	252	1621	0.73	0.16	46.2	D	46.2	D

Intersection Delay = 11.7 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: EXISTING AM PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2003
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	16	434	2	21	674	46	12	39	16	63	48	31
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.75	0.75	0.75	0.81	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.78
15 Vol	5	145	1	6	208	14	4	12	5	20	15	10
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	21	582		26	889			84			183	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.179			0.443	
Prop RTs		0.005			0.064			0.238			0.219	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
t Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	P				NB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		66.2						12.7			
Yellow		3.8						3.3			
All Red		2.0						2.0			

Cycle Length: 90.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	16	434	2	21	674	46	12	39	16	63	48	31
PHF	0.75	0.75	0.75	0.81	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.78
Adj flow	21	579	3	26	832	57	15	49	20	81	62	40
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	21	582		26	889			84			183	
Prop LTs	1.000	0.000		1.000	0.000			0.179			0.443	
Prop RTs		0.005			0.064			0.238			0.219	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.990			0.968			0.970	
fLT	0.248	1.000		0.402	1.000			0.919			0.815	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
[illegible]		1.000			1.000			1.000			1.000	
S[illegible]	432	1799		675	1845			1877			1621	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	21	432	0.05	0.76	326	0.06
Prot							
Perm							
Thru	TR	582	1799	0.32	0.76	1359	0.43
Right							
Westbound							
Prot							
Perm							
Left	L	26	675	0.04	0.76	510	0.05
Prot							
Perm							
Thru	TR	889	1845	# 0.48	0.76	1394	0.64
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	84	1877	0.04	0.16	292	0.29
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	183	1621	# 0.11	0.16	252	0.73
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.59
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.65

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.06	0.76	2.8	1.000	326	0.50	0.4	0.0	3.2	A		
TR	0.43	0.76	4.0	1.000	1359	0.50	1.0	0.0	5.0	A	4.9	A
Westbound												
L	0.05	0.76	2.8	1.000	510	0.50	0.2	0.0	3.0	A		
TR	0.64	0.76	5.2	1.000	1394	0.50	2.2	0.0	7.4	A	7.3	A
Northbound												
	0.29	0.16	33.6	1.000	292	0.11	0.5	0.0	34.1	C	34.1	C
Southbound												

LTR	0.73	0.16	36.2	1.000	252	0.29	10.0	0.0	46.2	D	46.2	D

Intersection delay = 11.7 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

			EB	WB	NB	SB
Cycle length, C	90.0	sec				
Total actual green time for LT lane group, G (s)			66.2	66.2		
Effective permitted green time for LT lane group, g(s)			68.0	68.0		
Opposing effective green time, go (s)			68.0	68.0		
Number of lanes in LT lane group, N			1	1		
Number of lanes in opposing approach, No			1	1		
Adjusted LT flow rate, VLT (veh/h)			21	26		
Proportion of LT in LT lane group, PLT			1.000	1.000		
Proportion of LT in opposing flow, PLTo			0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)			889	582		
Lost time for LT lane group, tL			4.00	4.00		
Computation						
LT volume per cycle, LTC=VLTC/3600			0.53	0.65		
Opposing lane util. factor, fLUo			1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			22.23	14.55		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.24	0.24		
gq, (see Exhibit C16-4,5,6,7,8)			17.47	6.51		
gu=g-gq if gq>=gf, or = g-gf if gq<gf			50.53	61.49		
r Max(gq-gf)/2,0)			8.73	3.26		
o=1-PLTo			1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			1.00	1.00		
EL1 (refer to Exhibit C16-3)			2.99	2.25		
EL2=Max((1-Ptho**n)/Plto, 1.0)						
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.06	0.06		
gdiff=max(gq-gf,0)			0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.25	0.40		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)						
or flt=[fm+0.91(N-1)]/N**						
Left-turn adjustment, fLT			0.248	0.402		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

			EB	WB	NB	SB
Cycle length, C	90.0	sec				
Total actual green time for LT lane group, G (s)					12.7	12.7
ective permitted green time for LT lane group, g(s)					14.0	14.0
osing effective green time, go (s)					14.0	14.0
Number of lanes in LT lane group, N					1	1
Number of lanes in opposing approach, No					1	1

Adjusted LT flow rate, VLT (veh/h)			15	81
Proportion of LT in LT lane group, PLT	0.000	0.000	0.179	0.443
Proportion of LT in opposing flow, PLTo			0.44	0.18
Adjusted opposing flow rate, Vo (veh/h)			183	84
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.38	2.03
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			4.57	2.10
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			4.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.84	0.84
gq, (see Exhibit C16-4,5,6,7,8)			9.16	3.27
gu=g-gq if gq>=gf, or = g-gf if gq<gf			4.84	10.73
n=Max(gq-gf)/2,0)			2.59	1.64
PTHo=1-PLTo			0.56	0.82
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.18	0.44
EL1 (refer to Exhibit C16-3)			1.67	1.50
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.76	1.54
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.17	0.21
gdiff=max(gq-gf,0)			5.18	3.27
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.92	0.82
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.919	0.815

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

* special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	90.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v						
v/c ratio from Capacity Worksheet, X						
Protected phase effective green interval, g (s)						
Opposing queue effective green interval, gq						
Unopposed green interval, gu						
Red time r=(C-g-gq-gu)						
Arrival rate, qa=v/(3600(max[X,1.0]))						
Protected ph. departure rate, Sp=s/3600						
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)						
XPerm						
XProt						
Case						
Queue at beginning of green arrow, Qa						
Queue at beginning of unsaturated green, Qu						
Residual queue, Qr						
Uniform Delay, d1						

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 11.7 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR			LTR			LTR	
Init Queue	0.0	0.0		0.0	0.0			0.0			0.0	
Flow Rate	21	582		26	889			84			183	
So	1900	1900		1900	1900			1900			1900	
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
SL	432	1799		675	1845			1877			1621	
Capacity	326	1359		510	1394			292			252	
Flow Ratio	0.05	0.32		0.04	0.48			0.04			0.11	
v/c Ratio	0.06	0.43		0.05	0.64			0.29			0.73	
Grn Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.1	5.3		0.2	10.5			1.9			4.4	
kB	0.5	1.4		0.7	1.4			0.3			0.3	
Q2	0.0	1.0		0.0	2.4			0.1			0.7	
Q Average	0.2	6.3		0.2	12.9			2.0			5.1	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.0	0.2		0.1	0.3			0.1			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.2	7.7		0.3	15.6			2.4			6.1	
QSRatio	0.0	0.2		0.1	0.4			0.2			0.2	
85th Percentile Output:												
fB%	1.7	1.5		1.7	1.4			1.6			1.6	
BOQ	0.3	9.4		0.3	18.4			3.1			7.9	
QSRatio	0.1	0.2		0.1	0.5			0.2			0.2	
90th Percentile Output:												
fB%	2.0	1.6		2.0	1.5			1.8			1.7	
BOQ	0.3	10.4		0.4	19.9			3.5			8.7	
QSRatio	0.1	0.3		0.1	0.5			0.2			0.2	
95th Percentile Output:												
fB%	2.6	1.9		2.6	1.7			2.0			2.0	
BOQ	0.4	11.9		0.5	21.7			4.1			9.9	
QSRatio	0.1	0.3		0.1	0.5			0.3			0.2	
98th Percentile Output:												
fB%	3.1	2.1		3.1	1.8			2.6			2.4	
BOQ	0.5	13.4		0.6	23.4			5.1			12.1	
QSRatio	0.1	0.3		0.2	0.6			0.3			0.3	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: EXISTING PM PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2003
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	29	791	7	19	543	7	16	86	47	57	58	20
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	69.2						19.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	433	610	0.09	0.71	4.9	A		
TR	1277	1798	0.82	0.71	16.2	B	15.8	B
Westbound								
L	165	233	0.13	0.71	6.3	A		
TR	1320	1859	0.48	0.71	7.7	A	7.6	A
Northbound								
LTR	408	1941	0.44	0.21	35.2	D	35.2	D
Southbound								
LTR	300	1430	0.49	0.21	36.0	D	36.0	D

Intersection Delay = 16.3 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

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Analysis Year: 2003
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East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	29	791	7	19	543	7	16	86	47	57	58	20
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.76	0.76	0.76	0.86	0.86	0.86	0.83	0.83	0.83	0.92	0.92	0.92
PHF 15 Vol	10	260	2	6	158	2	5	26	14	15	16	5
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	38	1050		22	639			180			147	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.106			0.422	
Prop RTs		0.009			0.013			0.317			0.150	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
t Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	P				NB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		69.2						19.7			
Yellow		3.8						3.3			
All Red		2.0						2.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	29	791	7	19	543	7	16	86	47	57	58	20
PHF	0.76	0.76	0.76	0.86	0.86	0.86	0.83	0.83	0.83	0.92	0.92	0.92
Adj flow	38	1041	9	22	631	8	19	104	57	62	63	22
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	38	1050		22	639			180			147	
Prop LTs	1.000	0.000		1.000	0.000			0.106			0.422	
Prop RTs		0.009			0.013			0.317			0.150	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound				Northbound			Southbound	
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.998			0.957			0.980	
fLT	0.351	1.000		0.139	1.000			0.961			0.712	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
f[illegible]		1.000			1.000			1.000			1.000	
S[illegible]	610	1798		233	1859			1941			1430	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	38	610	0.06	0.71	433	0.09
Prot							
Perm							
Thru	TR	1050	1798	# 0.58	0.71	1277	0.82
Right							
Westbound							
Prot							
Perm							
Left	L	22	233	0.09	0.71	165	0.13
Prot							
Perm							
Thru	TR	639	1859	0.34	0.71	1320	0.48
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	180	1941	0.09	0.21	408	0.44
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	147	1430	# 0.10	0.21	300	0.49
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.69
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.75

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.09	0.71	4.5	1.000	433	0.50	0.4	0.0	4.9	A		
TR	0.82	0.71	10.1	1.000	1277	0.50	6.1	0.0	16.2	B	15.8	B
Westbound												
L	0.13	0.71	4.6	1.000	165	0.50	1.7	0.0	6.3	A		
TR	0.48	0.71	6.4	1.000	1320	0.50	1.3	0.0	7.7	A	7.6	A
Northbound												
[illegible]	0.44	0.21	34.4	1.000	408	0.11	0.8	0.0	35.2	D	35.2	D
Southbound												

LTR	0.49	0.21	34.8	1.000	300	0.11	1.3	0.0	36.0	D	36.0	D

Intersection delay = 16.3 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)		69.2	69.2		
Effective permitted green time for LT lane group, g(s)		71.0	71.0		
Opposing effective green time, go (s)		71.0	71.0		
Number of lanes in LT lane group, N		1	1		
Number of lanes in opposing approach, No		1	1		
Adjusted LT flow rate, VLT (veh/h)		38	22		
Proportion of LT in LT lane group, PLT		1.000	1.000		
Proportion of LT in opposing flow, PLTo		0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)		639	1050		
Lost time for LT lane group, tL		4.00	4.00		
Computation					
LT volume per cycle, LTC=VLTC/3600		1.06	0.61		
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		17.75	29.17		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.29	0.29		
gq, (see Exhibit C16-4,5,6,7,8)		11.96	36.60		
gu=g-gq if gq>=gf, or = g-gf if gq<gf		59.04	34.40		
n=Max(gq-gf)/2,0)		5.98	18.30		
o=1-PLTo		1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00		
EL1 (refer to Exhibit C16-3)		2.37	3.48		
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.06	0.06		
gdiff=max(gq-gf,0)		0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.35	0.14		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.351	0.139		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)				19.7	19.7
Effective permitted green time for LT lane group, g(s)				21.0	21.0
Opposing effective green time, go (s)				21.0	21.0
Number of lanes in LT lane group, N				1	1
Number of lanes in opposing approach, No				1	1

Adjusted LT flow rate, VLT (veh/h)			19	62
Proportion of LT in LT lane group, PLT	0.000	0.000	0.106	0.422
Proportion of LT in opposing flow, PLTo			0.42	0.11
Adjusted opposing flow rate, Vo (veh/h)			147	180
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.53	1.72
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			4.08	5.00
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			7.1	1.9
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.79	0.79
gq, (see Exhibit C16-4,5,6,7,8)			7.25	9.12
gu=g-gq if gq>=gf, or = g-gf if gq<gf			13.75	11.88
n=Max(gq-gf)/2,0)			0.08	3.63
PTHo=1-PLTo			0.58	0.89
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.11	0.42
EL1 (refer to Exhibit C16-3)			1.61	1.66
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.00	3.15
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.11	0.14
gdiff=max(gq-gf,0)			0.16	7.25
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.96	0.71
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.961	0.712

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
Vpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	100.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v					
v/c ratio from Capacity Worksheet, X					
Protected phase effective green interval, g (s)					
Opposing queue effective green interval, gq					
Unopposed green interval, gu					
Red time r=(C-g-gq-gu)					
Arrival rate, qa=v/(3600(max[X,1.0]))					
Protected ph. departure rate, Sp=s/3600					
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)					
XPerm					
XProt					
Case					
Queue at beginning of green arrow, Qa					
Queue at beginning of unsaturated green, Qu					
Residual queue, Qr					
Uniform Delay, d1					

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 16.3 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR			LTR			LTR	
Init Queue	0.0	0.0		0.0	0.0			0.0			0.0	
Flow Rate	38	1050		22	639			180			147	
So	1900	1900		1900	1900			1900			1900	
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
SL	610	1798		233	1859			1941			1430	
apacity	433	1277		165	1320			408			300	
w Ratio	0.06	0.58		0.09	0.34			0.09			0.10	
v/c Ratio	0.09	0.82		0.13	0.48			0.44			0.49	
Grn Ratio	0.71	0.71		0.71	0.71			0.21			0.21	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.3	20.3		0.2	7.8			4.4			3.6	
kB	0.7	1.5		0.3	1.5			0.4			0.4	
Q2	0.1	5.6		0.1	1.4			0.3			0.3	
Q Average	0.4	26.0		0.2	9.2			4.7			3.9	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.1	0.6		0.1	0.2			0.3			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.5	31.2		0.3	11.2			5.6			4.7	
QSRatio	0.1	0.8		0.1	0.3			0.4			0.1	
85th Percentile Output:												
fB%	1.7	1.4		1.7	1.4			1.6			1.6	
BOQ	0.7	36.4		0.4	13.3			7.3			6.1	
QSRatio	0.1	0.9		0.1	0.3			0.5			0.2	
90th Percentile Output:												
fB%	2.0	1.5		2.0	1.6			1.7			1.7	
BOQ	0.8	39.0		0.5	14.6			8.0			6.8	
atio	0.2	1.0		0.1	0.4			0.5			0.2	
95th Percentile Output:												
fB%	2.5	1.6		2.6	1.8			2.0			2.0	
BOQ	1.0	41.7		0.6	16.2			9.2			7.8	
QSRatio	0.2	1.0		0.2	0.4			0.6			0.2	
98th Percentile Output:												
fB%	3.1	1.7		3.1	1.9			2.4			2.4	
BOQ	1.2	44.3		0.8	17.9			11.2			9.6	
QSRatio	0.2	1.1		0.2	0.4			0.7			0.2	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: EXISTING SAT PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2003
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	22	567	2	19	640	42	16	48	35	52	59	23
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	44.2						14.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	332	505	0.07	0.66	4.7	A		
TR	1183	1800	0.50	0.66	7.6	A	7.5	A
Westbound								
L	407	620	0.05	0.66	4.5	A		
TR	1213	1846	0.59	0.66	8.9	A	8.7	A
Northbound								
LTR	430	1883	0.31	0.23	22.8	C	22.8	C
Southbound								
LTR	391	1711	0.42	0.23	23.7	C	23.7	C

Intersection Delay = 10.9 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: EXISTING SAT PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2003
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	22	567	2	19	640	42	16	48	35	52	59	23
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.75	0.75	0.75	0.82	0.82	0.82
15 Vol	6	146	1	5	168	11	5	16	12	16	18	7
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	23	587		20	718			132			163	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.159			0.387	
Prop RTs		0.003			0.061			0.356			0.172	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
t Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	P				NB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		44.2						14.7			
Yellow		3.8						3.3			
All Red		2.0						2.0			

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	22	567	2	19	640	42	16	48	35	52	59	23
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.75	0.75	0.75	0.82	0.82	0.82
Adj flow	23	585	2	20	674	44	21	64	47	63	72	28
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	23	587		20	718			132			163	
Prop LTs	1.000	0.000		1.000	0.000			0.159			0.387	
Prop RTs		0.003			0.061			0.356			0.172	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.991			0.952			0.977	
fLT	0.291	1.000		0.370	1.000			0.937			0.855	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
fRpb		1.000			1.000			1.000			1.000	
S	505	1800		620	1846			1883			1711	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	23	505	0.05	0.66	332	0.07
Prot							
Perm							
Thru	TR	587	1800	0.33	0.66	1183	0.50
Right							
Westbound							
Prot							
Perm							
Left	L	20	620	0.03	0.66	407	0.05
Prot							
Perm							
Thru	TR	718	1846	# 0.39	0.66	1213	0.59
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	132	1883	0.07	0.23	430	0.31
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	163	1711	# 0.10	0.23	391	0.42
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.48
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.55

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.07	0.66	4.3	1.000	332	0.50	0.4	0.0	4.7	A		
TR	0.50	0.66	6.1	1.000	1183	0.50	1.5	0.0	7.6	A	7.5	A
Westbound												
L	0.05	0.66	4.3	1.000	407	0.50	0.2	0.0	4.5	A		
TR	0.59	0.66	6.7	1.000	1213	0.50	2.1	0.0	8.9	A	8.7	A
Northbound												
I	0.31	0.23	22.4	1.000	430	0.11	0.4	0.0	22.8	C	22.8	C
Southbound												

LTR	0.42	0.23	23.0	1.000	391	0.11	0.7	0.0	23.7	C	23.7	C

Intersection delay = 10.9 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

			EB	WB	NB	SB
Cycle length, C	70.0	sec				
Total actual green time for LT lane group, G (s)			44.2	44.2		
Effective permitted green time for LT lane group, g(s)			46.0	46.0		
Opposing effective green time, go (s)			46.0	46.0		
Number of lanes in LT lane group, N			1	1		
Number of lanes in opposing approach, No			1	1		
Adjusted LT flow rate, VLT (veh/h)			23	20		
Proportion of LT in LT lane group, PLT			1.000	1.000		
Proportion of LT in opposing flow, PLTo			0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)			718	587		
Lost time for LT lane group, tL			4.00	4.00		
Computation						
LT volume per cycle, LTC=VLTC/3600			0.45	0.39		
Opposing lane util. factor, fLUo			1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			13.96	11.41		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.34	0.34		
gq, (see Exhibit C16-4,5,6,7,8)			11.93	7.61		
gu=g-gq if gq>=gf, or = g-gf if gq<gf			34.07	38.39		
[illegible]Max(gq-gf)/2,0)			5.96	3.81		
[illegible]o=1-PLTo			1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			1.00	1.00		
EL1 (refer to Exhibit C16-3)			2.55	2.26		
EL2=Max((1-Ptho**n)/Plto, 1.0)						
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.09	0.09		
gdiff=max(gq-gf,0)			0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.29	0.37		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)						
or flt=[fm+0.91(N-1)]/N**						
Left-turn adjustment, fLT			0.291	0.370		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

			EB	WB	NB	SB
Cycle length, C	70.0	sec				
Total actual green time for LT lane group, G (s)					14.7	14.7
[illegible]ective permitted green time for LT lane group, g(s)					16.0	16.0
[illegible]osing effective green time, go (s)					16.0	16.0
Number of lanes in LT lane group, N					1	1
Number of lanes in opposing approach, No					1	1

Adjusted LT flow rate, VLT (veh/h)			21	63
Proportion of LT in LT lane group, PLT	0.000	0.000	0.159	0.387
Proportion of LT in opposing flow, PLTo			0.39	0.16
Adjusted opposing flow rate, Vo (veh/h)			163	132
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.41	1.23
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			3.17	2.57
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			5.0	1.5
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.77	0.77
gq, (see Exhibit C16-4,5,6,7,8)			5.04	3.70
gu=g-gq if gq>=gf, or = g-gf if gq<gf			10.96	12.30
n=Max(gq-gf)/2,0)			0.02	1.08
PTHo=1-PLTo			0.61	0.84
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.16	0.39
EL1 (refer to Exhibit C16-3)			1.63	1.58
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.00	1.07
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.14	0.17
gdiff=max(gq-gf,0)			0.03	2.16
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.94	0.85
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.937	0.855

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
ective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v						
v/c ratio from Capacity Worksheet, X						
Protected phase effective green interval, g (s)						
Opposing queue effective green interval, gq						
Unopposed green interval, gu						
Red time r=(C-g-gq-gu)						
Arrival rate, qa=v/(3600(max[X,1.0]))						
Protected ph. departure rate, Sp=s/3600						
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)						
XPerm						
XProt						
Case						
Queue at beginning of green arrow, Qa						
Queue at beginning of unsaturated green, Qu						
Residual queue, Qr						
Uniform Delay, d1						

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 10.9 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR		LTR		LTR	
Init Queue	0.0	0.0		0.0	0.0		0.0		0.0	
Flow Rate	23	587		20	718		132		163	
So	1900	1900		1900	1900		1900		1900	
No.Lanes	1	1	0	1	1	0	0 1	0	0 1	0
SL	505	1800		620	1846		1883		1711	
Capacity	332	1183		407	1213		430		391	
Flow Ratio	0.05	0.33		0.03	0.39		0.07		0.10	
v/c Ratio	0.07	0.50		0.05	0.59		0.31		0.42	
Grn Ratio	0.66	0.66		0.66	0.66		0.23		0.23	
I Factor		1.000			1.000		1.000		1.000	
AT or PVG	3	3		3	3		3		3	
Pltn Ratio	1.00	1.00		1.00	1.00		1.00		1.00	
PF2	1.00	1.00		1.00	1.00		1.00		1.00	
Q1	0.2	5.8		0.1	7.8		2.1		2.7	
kB	0.4	1.1		0.5	1.1		0.4		0.3	
Q2	0.0	1.0		0.0	1.6		0.2		0.2	
Q Average	0.2	6.9		0.2	9.4		2.3		2.9	
Q Spacing	25.0	25.0		25.0	25.0		25.0		25.0	
Q Storage	125	1000		100	1000		375		1000	
Q S Ratio	0.0	0.2		0.0	0.2		0.2		0.1	
70th Percentile Output:										
fB%	1.3	1.2		1.3	1.2		1.2		1.2	
BOQ	0.3	8.4		0.2	11.4		2.7		3.5	
QSRatio	0.1	0.2		0.1	0.3		0.2		0.1	
85th Percentile Output:										
fB%	1.7	1.5		1.7	1.4		1.6		1.6	
BOQ	0.3	10.1		0.3	13.6		3.6		4.6	
QSRatio	0.1	0.3		0.1	0.3		0.2		0.1	
90th Percentile Output:										
fB%	2.0	1.6		2.0	1.6		1.8		1.7	
BOQ	0.4	11.1		0.3	14.8		4.0		5.1	
QSRatio	0.1	0.3		0.1	0.4		0.3		0.1	
95th Percentile Output:										
fB%	2.6	1.9		2.6	1.8		2.0		2.0	
BOQ	0.5	12.7		0.4	16.5		4.6		5.9	
QSRatio	0.1	0.3		0.1	0.4		0.3		0.1	
98th Percentile Output:										
fB%	3.1	2.1		3.2	1.9		2.5		2.5	
BOQ	0.6	14.3		0.5	18.1		5.8		7.3	
QSRatio	0.1	0.4		0.1	0.5		0.4		0.2	

ERROR MESSAGES

No errors to report.

APPENDIX E: CAPACITY ANALYSIS WORKSHEETS – NO BUILD CONDITIONS

I. Signalized Intersections

I. Signalized Intersections

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: NO BUILD AM PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	140	330	60	85	544	103	86	443	46	59	415	145
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		6.5	33.7					34.7			
Yellow		3.0	3.8					3.8			
All Red		1.5	1.5					1.5			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	227	1593	0.66	0.52	25.5	C		
T	963	1863	0.36	0.52	13.2	B	16.2	B
R	736	1425	0.09	0.52	11.1	B		
Westbound								
L	377	957	0.24	0.39	19.8	B		
TR	717	1818	0.97	0.39	53.9	D	50.0	D
Northbound								
L	107	263	0.89	0.41	78.2	E		
TR	695	1714	0.77	0.41	28.6	C	36.1	D
Southbound								
L	148	366	0.43	0.41	21.2	C		
TR	702	1731	0.86	0.41	34.7	C	33.4	C

Intersection Delay = 35.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: NO BUILD AM PEAK
Intersection: CR 11 @ CR 10
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	140	330	60	85	544	103	86	443	46	59	415	145
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93
PK 15 Vol	37	88	16	23	146	28	24	122	13	16	112	39
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	149	351	64	91	696		95	538		63	602	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.159			0.095			0.259	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4		5	6	7	8
Left	A	P			NB Left	A			
Thru	A	P			Thru	A			
Right	A	P			Right	A			
Peds					Peds				
WB Left		P			SB Left	A			
Thru		P			Thru	A			
Right		P			Right	A			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	6.5	33.7				34.7			
Yellow	3.0	3.8				3.8			
All Red	1.5	1.5				1.5			

Cycle Length: 90.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	140	330	60	85	544	103	86	443	46	59	415	145
PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93
Adj flow	149	351	64	91	585	111	95	487	51	63	446	156
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	149	351	64	91	696		95	538		63	602	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.159			0.095			0.259	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.976			0.986			0.961	
fLT	0.950	1.000		0.551	1.000		0.157	1.000		0.218	1.000	
Sec.	0.105											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
b		1.000	1.000		1.000			1.000			1.000	
S	1593	1863	1425	957	1818		263	1714		366	1731	
Sec.	176											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		147	1593	# 0.09	0.092	147	1.00
Perm		2	176	0.01	0.424	80	0.03
Left	L	149			0.52	227	0.66
Prot							
Perm							
Thru	T	351	1863	0.19	0.52	963	0.36
Right	R	64	1425	0.04	0.52	736	0.09
Westbound							
Prot							
Perm							
Left	L	91	957	0.10	0.39	377	0.24
Prot							
Perm							
Thru	TR	696	1818	# 0.38	0.39	717	0.97
Right							
Northbound							
Prot							
Perm							
Left	L	95	263	# 0.36	0.41	107	0.89
Prot							
Perm							
Thru	TR	538	1714	0.31	0.41	695	0.77
Right							
Southbound							
Prot							
Perm							
Left	L	63	366	0.17	0.41	148	0.43
Prot							
Perm							
Thru	TR	602	1731	0.35	0.41	702	0.86
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.84
Total lost time per cycle, L = 10.50 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.95

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.66	0.52	18.7	1.000	227	0.23	6.7	0.0	25.5	C		
T	0.36	0.52	13.0	1.000	963	0.11	0.2	0.0	13.2	B	16.2	B
R	0.09	0.52	11.0	1.000	736	0.11	0.1	0.0	11.1	B		
Westbound												
L	0.24	0.39	18.2	1.000	377	0.50	1.5	0.0	19.8	B		
TR	0.97	0.39	26.7	1.000	717	0.50	27.2	0.0	53.9	D	50.0	D
Northbound												
L	0.89	0.41	24.8	1.000	107	0.41	53.4	0.0	78.2	E		
TR	0.77	0.41	23.2	1.000	695	0.32	5.5	0.0	28.6	C	36.1	D
Southbound												
L	0.43	0.41	19.2	1.000	148	0.11	2.0	0.0	21.2	C		

TR	0.86	0.41	24.4	1.000	702	0.39	10.3	0.0	34.7	C	33.4	C

Intersection delay = 35.3 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	90.0 sec				
Total actual green time for LT lane group, G (s)		44.7	33.7	34.7	34.7
Effective permitted green time for LT lane group, g(s)		38.2	35.5	36.5	36.5
Opposing effective green time, go (s)		35.5	46.5	36.5	36.5
Number of lanes in LT lane group, N		1	1	1	1
Number of lanes in opposing approach, No		1	1	1	1
Adjusted LT flow rate, VLT (veh/h)		149	91	95	63
Proportion of LT in LT lane group, PLT		1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo		0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)		696	351	602	538
Lost time for LT lane group, tL		3.50	3.50	3.50	3.50
Computation					
LT volume per cycle, LTC=VLTC/3600		3.73	2.28	2.38	1.58
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		17.40	8.77	15.05	13.45
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.61	0.48	0.59	0.59
gq, (see Exhibit C16-4,5,6,7,8)		34.20	0.00	23.38	19.31
gu=g-gq if gq>=gf, or = g-gf if gq<gf		4.00	35.50	13.12	17.19
n=Max(gq-gf)/2,0)		17.10	0.00	11.69	9.65
[illegible]o=1-PLTo		1.00	1.00	1.00	1.00
P[illegible]=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)		2.50	1.82	2.29	2.16
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.10	0.11	0.11	0.11
gdiff=max(gq-gf,0)		0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.10	0.55	0.16	0.22
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.105	0.551	0.157	0.218

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	90.0 sec				
Total actual green time for LT lane group, G (s)					
Effective permitted green time for LT lane group, g(s)					
Opposing effective green time, go (s)					
Number of lanes in LT lane group, N					
Number of lanes in opposing approach, No					

Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
volume per cycle, LTC=VLTC/3600
osing lane util. factor, fLUo 1.00 1.00 1.00 1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
ective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	90.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v			149			
v/c ratio from Capacity Worksheet, X			0.66			
Protected phase effective green interval, g (s)			8.3			
Opposing queue effective green interval, gq			34.20			
Unopposed green interval, gu			4.00			
Red time r=(C-g-gq-gu)			43.5			
Arrival rate, qa=v/(3600(max[X,1.0]))			0.04			
Protected ph. departure rate, Sp=s/3600			0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)			0.47			
XPerm			0.85			
XProt			0.58			
Case			1			
Queue at beginning of green arrow, Qa			1.80			
Queue at beginning of unsaturated green, Qu			1.42			
Residual queue, Qr			0.00			
Uniform Delay, d1			18.7			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 35.3 sec/veh Intersection LOS D

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	149	351	64	91	696		95	538		63	602	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
SL	429	1863	1425	957	1818		263	1714		366	1731	
Capacity	227	963	736	377	717		107	695		148	702	
Flow Ratio	0.35	0.19	0.04	0.10	0.38		0.36	0.31		0.17	0.35	
v/c Ratio	0.66	0.36	0.09	0.24	0.97		0.89	0.77		0.43	0.86	
Grn Ratio	0.52	0.52	0.52	0.39	0.39		0.41	0.41		0.41	0.41	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	1.9	5.2	0.8	1.5	17.1		2.2	11.7		1.1	13.7	
kB	0.3	0.7	0.6	0.6	0.9		0.2	0.6		0.2	0.6	
Q2	0.5	0.4	0.1	0.2	7.7		0.9	1.7		0.2	2.8	
Q Average	2.4	5.6	0.9	1.7	24.7		3.1	13.4		1.3	16.5	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	0.8	0.1	0.2	0.4	6.2		0.8	1.1		0.3	0.4	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.2		1.2	1.2	
BOQ	2.9	6.7	1.0	2.2	29.7		3.7	15.7		1.5	19.2	
QSRatio	1.0	0.2	0.3	0.5	7.4		0.9	1.3		0.4	0.5	
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4		1.6	1.5		1.6	1.5	
BOQ	3.8	8.7	1.4	2.8	34.7		4.9	20.0		2.1	24.3	
QSRatio	1.3	0.2	0.3	0.6	8.7		1.2	1.7		0.5	0.6	
90th Percentile Output:												
fB%	1.8	1.7	1.8	1.9	1.5		1.7	1.6		1.8	1.6	
BOQ	4.3	9.5	1.5	3.2	37.2		5.4	21.5		2.3	25.9	
QSRatio	1.4	0.2	0.4	0.7	9.3		1.4	1.8		0.6	0.6	
95th Percentile Output:												
fB%	2.0	1.9	2.1	2.3	1.6		2.0	1.8		2.1	1.7	
BOQ	4.9	10.9	1.8	3.9	39.7		6.2	23.9		2.7	28.7	
QSRatio	1.6	0.3	0.4	0.9	9.9		1.6	2.0		0.7	0.7	
98th Percentile Output:												
fB%	2.5	2.3	2.6	2.8	1.7		2.5	2.1		2.6	2.0	
BOQ	6.1	13.2	2.3	4.7	42.3		7.7	27.6		3.4	32.6	
QSRatio	2.0	0.3	0.6	1.0	10.6		1.9	2.3		0.8	0.8	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: NO BUILD PM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	239	613	71	80	393	122	80	682	52	87	411	114
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	P			NB	Left	A			
Thru	A	P				Thru	A			
Right	A	P				Right	A			
Peds						Peds				
WB Left		P			SB	Left	A			
Thru		P				Thru	A			
Right		P				Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	6.5	35.7					42.7			
Yellow	3.5	3.8					3.8			
All Red	1.0	1.5					1.5			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	204	1593	1.24	0.49	167.0	F		
T	904	1863	0.71	0.49	23.0	C	59.6	E
R	691	1425	0.11	0.49	14.1	B		
Westbound								
L	170	452	0.55	0.38	37.0	D		
TR	674	1796	0.90	0.38	46.7	D	45.4	D
Northbound								
L	167	376	0.51	0.44	22.7	C		
TR	765	1720	1.03	0.44	68.6	E	64.1	E
Southbound								
L	72	151	1.32	0.44	241.1	F		
TR	775	1742	0.74	0.44	26.6	C	57.2	E

Intersection Delay = 57.2 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst:	REB
Agency/Co.:	RMS ENGINEERING
Date Performed:	6/30/2003
Analysis Time Period:	NO BUILD PM PEAK
Intersection:	CR 11 @ CR 10
Area Type:	All other areas
Jurisdiction:	TOWN OF HUNTINGTON
Analysis Year:	2005

Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	239	613	71	80	393	122	80	682	52	87	411	114
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92
PK 15 Vol	63	161	19	24	116	36	22	183	14	24	112	31
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	252	645	75	94	606		86	789		95	571	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.238			0.071			0.217	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4		5	6	7	8
[illegible] Left	A	P			NB Left	A			
[illegible] Thru	A	P			Thru	A			
Right	A	P			Right	A			
Peds					Peds				
WB Left		P			SB Left	A			
Thru		P			Thru	A			
Right		P			Right	A			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	6.5	35.7				42.7			
Yellow	3.5	3.8				3.8			
All Red	1.0	1.5				1.5			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
[illegible]ume, V	239	613	71	80	393	122	80	682	52	87	411	114
[illegible] PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92
Adj flow	252	645	75	94	462	144	86	733	56	95	447	124
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	252	645	75	94	606		86	789		95	571	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.238			0.071			0.217	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.964			0.989			0.967	
fLT	0.950	1.000		0.260	1.000		0.224	1.000		0.090	1.000	
Sec.	0.100											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
[illegible] b		1.000	1.000		1.000			1.000			1.000	
[illegible]	1593	1863	1425	452	1796		376	1720		151	1742	
Sec.	167											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		132	1593	# 0.08	0.083	132	1.00
Perm		120	167	# 0.72	0.402	72	1.67
Left	L	252			0.49	204	1.24
Prot							
Perm							
Thru	T	645	1863	0.35	0.49	904	0.71
Right	R	75	1425	0.05	0.49	691	0.11
Westbound							
Prot							
Perm							
Left	L	94	452	0.21	0.38	170	0.55
Prot							
Perm							
Thru	TR	606	1796	0.34	0.38	674	0.90
Right							
Northbound							
Prot							
Perm							
Left	L	86	376	0.23	0.44	167	0.51
Prot							
Perm							
Thru	TR	789	1720	0.46	0.44	765	1.03
Right							
Southbound							
Prot							
Perm							
Left	L	95	151	# 0.63	0.44	72	1.32
Prot							
Perm							
Thru	TR	571	1742	0.33	0.44	775	0.74
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 1.43
Total lost time per cycle, L = 7.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 1.54

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	1.24	0.49	26.2	1.000	204	0.50	140.7	0.0	167.0	F		
T	0.71	0.49	20.3	1.000	904	0.28	2.7	0.0	23.0	C	59.6	E
R	0.11	0.49	14.0	1.000	691	0.11	0.1	0.0	14.1	B		
Westbound												
L	0.55	0.38	24.6	1.000	170	0.50	12.3	0.0	37.0	D		
TR	0.90	0.38	29.5	1.000	674	0.50	17.2	0.0	46.7	D	45.4	D
Northbound												
L	0.51	0.44	20.0	1.000	167	0.12	2.8	0.0	22.7	C		
T	1.03	0.44	27.8	1.000	765	0.50	40.9	0.0	68.6	E	64.1	E
Southbound												
L	1.32	0.44	27.8	1.000	72	0.50	213.3	0.0	241.1	F		

TR	0.74	0.44	22.9	1.000	775	0.29	3.7	0.0	26.6	C	57.2	E

Intersection delay = 57.2 (sec/veh) Intersection LOS = E

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)		46.7	35.7	42.7	42.7
Effective permitted green time for LT lane group, g(s)		40.2	37.5	44.5	44.5
Opposing effective green time, go (s)		37.5	48.5	44.5	44.5
Number of lanes in LT lane group, N		1	1	1	1
Number of lanes in opposing approach, No		1	1	1	1
Adjusted LT flow rate, VLT (veh/h)		252	94	86	95
Proportion of LT in LT lane group, PLT		1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo		0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)		606	645	571	789
Lost time for LT lane group, tL		3.50	3.50	3.50	3.50
Computation					
LT volume per cycle, LTC=VLTC/3600		7.00	2.61	2.39	2.64
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		16.83	17.92	15.86	21.92
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.63	0.51	0.56	0.56
gq, (see Exhibit C16-4,5,6,7,8)		31.72	14.26	22.29	39.81
gu=g-gq if gq>=gf, or = g-gf if gq<gf		8.48	23.24	22.21	4.69
n=Max(gq-gf)/2,0)		15.86	7.13	11.14	19.91
Pto=1-PLTo		1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)		2.30	2.38	2.22	2.72
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.10	0.11	0.09	0.09
gdiff=max(gq-gf,0)		0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.10	0.26	0.22	0.09
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.100	0.260	0.224	0.090

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)					
Effective permitted green time for LT lane group, g(s)					
Opposing effective green time, go (s)					
Number of lanes in LT lane group, N					
Number of lanes in opposing approach, No					

Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT	0.000	0.000	0.000	0.000
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	100.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		252			
v/c ratio from Capacity Worksheet, X		1.24			
Protected phase effective green interval, g (s)		8.3			
Opposing queue effective green interval, gq		31.72			
Unopposed green interval, gu		8.48			
Red time r=(C-g-gq-gu)		51.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.06			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.22			
XPerm		1.22			
XProt		0.92			
Case		3			
Queue at beginning of green arrow, Qa		3.33			
Queue at beginning of unsaturated green, Qu		1.80			
Residual queue, Qr		0.41			
Uniform Delay, d1		26.2			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 57.2 sec/veh Intersection LOS E

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR				
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0				
Flow Rate	252	645	75	94	606		86	789		95	571				
So	1900	1900	1900	1900	1900		1900	1900		1900	1900				
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0			
SL	411	1863	1425	452	1796		376	1720		151	1742				
Capacity	204	904	691	170	674		167	765		72	775				
[illegible]w Ratio	0.61	0.35	0.05	0.21	0.34		0.23	0.46		0.63	0.33				
v/c Ratio	1.24	0.71	0.11	0.55	0.90		0.51	1.03		1.32	0.74				
Grn Ratio	0.49	0.49	0.49	0.38	0.38		0.44	0.44		0.44	0.44				
I Factor		1.000			1.000			1.000			1.000				
AT or PVG	3	3	3	3	3		3	3		3	3				
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00				
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00				
Q1	3.9	14.1	1.1	2.1	15.9		1.7	21.9		2.6	13.1				
kB	0.3	0.7	0.6	0.4	0.9		0.3	0.6		0.1	0.6				
Q2	7.2	1.6	0.1	0.4	5.2		0.3	9.5		3.4	1.7				
Q Average	11.1	15.7	1.2	2.5	21.0		2.0	31.4		6.0	14.8				
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0				
Q Storage	75	1000	100	115	100		100	300		100	1000				
Q S Ratio	3.7	0.4	0.3	0.5	5.3		0.5	2.6		1.5	0.4				
70th Percentile Output:															
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.1		1.2	1.2				
BOQ	13.1	18.4	1.4	3.1	25.3		2.4	36.0		7.1	17.3				
QSRatio	4.4	0.5	0.4	0.7	6.3		0.6	3.0		1.8	0.4				
85th Percentile Output:															
fB%	1.5	1.5	1.6	1.6	1.4		1.6	1.4		1.5	1.5				
BOQ	16.8	23.3	1.9	3.9	29.6		3.1	44.1		9.3	21.9				
QSRatio	5.6	0.6	0.5	0.9	7.4		0.8	3.7		2.3	0.5				
90th Percentile Output:															
fB%	1.6	1.6	1.8	1.8	1.5		1.8	1.5		1.7	1.6				
BOQ	18.2	24.9	2.1	4.5	31.7		3.5	46.6		10.2	23.5				
[illegible]atio	6.1	0.6	0.5	1.0	7.9		0.9	3.9		2.6	0.6				
[illegible]th Percentile Output:															
fB%	1.8	1.8	2.1	2.2	1.6		2.0	1.6		1.9	1.8				
BOQ	20.3	27.6	2.5	5.5	34.0		4.0	50.4		11.6	26.0				
QSRatio	6.8	0.7	0.6	1.2	8.5		1.0	4.2		2.9	0.7				
98th Percentile Output:															
fB%	2.1	2.0	2.6	2.6	1.7		2.6	1.8		2.3	2.0				
BOQ	23.7	31.5	3.1	6.5	36.2		5.1	56.2		14.0	29.8				
QSRatio	7.9	0.8	0.8	1.4	9.1		1.3	4.7		3.5	0.7				

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: NO BUILD SAT PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	162	450	63	93	370	81	140	621	80	60	499	171
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	P			NB	Left	A			
Thru	A	P				Thru	A			
Right	A	P				Right	A			
Peds						Peds				
WB Left		P			SB	Left	A			
Thru		P				Thru	A			
Right		P				Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	7.5	17.7					29.7			
Yellow	3.0	3.8					3.8			
All Red	1.5	1.5					1.5			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	315	1593	0.57	0.45	16.9	B		
T	838	1863	0.59	0.45	15.5	B	15.5	B
R	641	1425	0.11	0.45	11.2	B		
Westbound								
L	234	839	0.50	0.28	28.5	C		
TR	505	1813	1.11	0.28	100.6	F	88.3	F
Northbound								
L	103	213	1.50	0.45	286.1	F		
TR	769	1709	1.00	0.45	52.0	D	91.0	F
Southbound								
L	103	213	0.63	0.45	26.6	C		
TR	779	1732	0.93	0.45	36.5	D	35.7	D

Intersection Delay = 58.6 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst:	REB
Agency/Co.:	RMS ENGINEERING
Date Performed:	6/30/2003
Analysis Time Period:	NO BUILD SAT PEAK
Intersection:	CR 11 @ CR 10
Area Type:	All other areas
Jurisdiction:	TOWN OF HUNTINGTON
Analysis Year:	2005

Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	162	450	63	93	370	81	140	621	80	60	499	171
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.91	0.91	0.91	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92
PK 15 Vol	45	124	17	29	116	25	38	171	22	16	136	46
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	178	495	69	116	563		154	770		65	728	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.179			0.114			0.255	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A	P			NB Left	A		
Thru	A	P			Thru	A		
Right	A	P			Right	A		
Peds					Peds			
WB Left		P			SB Left	A		
Thru		P			Thru	A		
Right		P			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	7.5	17.7			29.7			
Yellow	3.0	3.8			3.8			
All Red	1.5	1.5			1.5			

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	162	450	63	93	370	81	140	621	80	60	499	171
PHF	0.91	0.91	0.91	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92
Adj flow	178	495	69	116	462	101	154	682	88	65	542	186
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	178	495	69	116	563		154	770		65	728	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.179			0.114			0.255	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.973			0.983			0.962	
fLT	0.950	1.000		0.482	1.000		0.127	1.000		0.127	1.000	
Sec.	0.180											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000			1.000			1.000	
S	1593	1863	1425	839	1813		213	1709		213	1732	
Sec.	302											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		178	1593	# 0.11	0.133	212	0.84
Perm		0	302	0.00	0.317	103	0.00
Left	L	178			0.45	315	0.57
Prot							
Perm							
Thru	T	495	1863	0.27	0.45	838	0.59
Right	R	69	1425	0.05	0.45	641	0.11
Westbound							
Prot							
Perm							
Left	L	116	839	0.14	0.28	234	0.50
Prot							
Perm							
Thru	TR	563	1813	# 0.31	0.28	505	1.11
Right							
Northbound							
Prot							
Perm							
Left	L	154	213	# 0.72	0.45	103	1.50
Prot							
Perm							
Thru	TR	770	1709	0.45	0.45	769	1.00
Right							
Southbound							
Prot							
Perm							
Left	L	65	213	0.31	0.45	103	0.63
Prot							
Perm							
Thru	TR	728	1732	0.42	0.45	779	0.93
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 1.15
Total lost time per cycle, L = 10.50 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 1.35

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.57	0.45	14.6	1.000	315	0.16	2.4	0.0	16.9	B		
T	0.59	0.45	14.4	1.000	838	0.18	1.1	0.0	15.5	B	15.5	B
R	0.11	0.45	11.1	1.000	641	0.11	0.1	0.0	11.2	B		
Westbound												
L	0.50	0.28	21.1	1.000	234	0.50	7.3	0.0	28.5	C		
TR	1.11	0.28	25.3	1.000	505	0.50	75.4	0.0	100.6	F	88.3	F
Northbound												
L	1.50	0.45	19.3	1.000	103	0.50	266.9	0.0	286.1	F		
T	1.00	0.45	19.3	1.000	769	0.50	32.8	0.0	52.0	D	91.0	F
Southbound												
L	0.63	0.45	14.8	1.000	103	0.21	11.8	0.0	26.6	C		

TR	0.93	0.45	18.3	1.000	779	0.45	18.3	0.0	36.5	D	35.7	D

Intersection delay = 58.6 (sec/veh) Intersection LOS = E

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	29.7	17.7	29.7	29.7
Effective permitted green time for LT lane group, g(s)	22.2	19.5	31.5	31.5
Opposing effective green time, go (s)	19.5	31.5	31.5	31.5
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	1	1	1	1
Adjusted LT flow rate, VLT (veh/h)	178	116	154	65
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	563	495	728	770
Lost time for LT lane group, tL	3.50	3.50	3.50	3.50
Computation				
LT volume per cycle, LTC=VLTC/3600	3.46	2.26	2.99	1.26
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	10.95	9.63	14.16	14.97
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.72	0.55	0.55	0.55
gq, (see Exhibit C16-4,5,6,7,8)	18.20	0.00	22.65	25.28
gu=g-gq if gq>=gf, or = g-gf if gq<gf	4.00	19.50	8.85	6.22
n=Max(gq-gf)/2,0)	9.10	0.00	11.32	12.64
o=1-PLTo	1.00	1.00	1.00	1.00
[illegible]=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	2.21	2.07	2.57	2.68
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.18	0.21	0.13	0.13
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.18	0.48	0.13	0.13
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.180	0.482	0.127	0.127

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				

Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
T volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 1.00 1.00 1.00 1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
- ght turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		178			
v/c ratio from Capacity Worksheet, X		0.57			
Protected phase effective green interval, g (s)		9.3			
Opposing queue effective green interval, gq		18.20			
Unopposed green interval, gu		4.00			
Red time r=(C-g-gq-gu)		38.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.05			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.47			
XPerm		0.59			
XProt		0.57			
Case		1			
Queue at beginning of green arrow, Qa		1.90			
Queue at beginning of unsaturated green, Qu		0.90			
Residual queue, Qr		0.00			
Uniform Delay, d1		14.6			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 58.6 sec/veh Intersection LOS E

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	178	495	69	116	563		154	770		65	728	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
SL	683	1863	1425	839	1813		213	1709		213	1732	
T Capacity	315	838	641	234	505		103	769		103	779	
Flow Ratio	0.26	0.27	0.05	0.14	0.31		0.72	0.45		0.31	0.42	
v/c Ratio	0.57	0.59	0.11	0.50	1.11		1.50	1.00		0.63	0.93	
Grn Ratio	0.45	0.45	0.45	0.28	0.28		0.45	0.45		0.45	0.45	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	2.1	7.2	0.8	1.9	10.9		3.0	15.0		1.0	13.4	
kB	0.3	0.5	0.5	0.3	0.6		0.1	0.5		0.1	0.5	
Q2	0.4	0.8	0.1	0.3	11.0		6.8	7.0		0.2	4.3	
Q Average	2.4	8.0	0.8	2.2	22.0		9.8	22.0		1.2	17.8	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	0.8	0.2	0.2	0.5	5.5		2.4	1.8		0.3	0.4	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.2		1.2	1.2	
BOQ	2.9	9.4	1.0	2.8	26.4		11.5	25.5		1.4	20.7	
QSRatio	1.0	0.2	0.2	0.6	6.6		2.9	2.1		0.4	0.5	
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4		1.5	1.4		1.6	1.5	
BOQ	3.8	12.2	1.3	3.5	30.9		14.8	31.8		1.9	26.1	
QSRatio	1.3	0.3	0.3	0.8	7.7		3.7	2.6		0.5	0.7	
90th Percentile Output:												
fB%	1.8	1.7	1.8	1.8	1.5		1.6	1.5		1.8	1.6	
BOQ	4.3	13.3	1.5	4.0	33.1		16.1	33.8		2.1	27.8	
QSRatio	1.4	0.3	0.4	0.9	8.3		4.0	2.8		0.5	0.7	
95th Percentile Output:												
fB%	2.0	1.9	2.1	2.2	1.6		1.8	1.7		2.1	1.7	
BOQ	4.9	15.0	1.7	5.0	35.4		18.1	36.9		2.5	30.6	
QSRatio	1.6	0.4	0.4	1.1	8.9		4.5	3.1		0.6	0.8	
98th Percentile Output:												
fB%	2.5	2.2	2.6	2.7	1.7		2.2	1.9		2.6	2.0	
BOQ	6.1	17.9	2.2	5.9	37.8		21.2	41.5		3.2	34.7	
QSRatio	2.0	0.4	0.5	1.3	9.4		5.3	3.5		0.8	0.9	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: NO BUILD AM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	17	448	3	22	695	48	13	41	17	65	50	32
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	66.2						12.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	309	409	0.07	0.76	3.3	A		
TR	1359	1799	0.44	0.76	5.1	A	5.0	A
Westbound								
L	496	657	0.05	0.76	3.0	A		
TR	1394	1845	0.66	0.76	7.8	A	7.7	A
Northbound								
LTR	290	1864	0.30	0.16	34.3	C	34.3	C
Southbound								
LTR	250	1604	0.75	0.16	48.4	D	48.4	D

Intersection Delay = 12.2 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: NO BUILD AM PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	17	448	3	22	695	48	13	41	17	65	50	32
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.75	0.75	0.75	0.81	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.78
PHF 15 Vol	6	149	1	7	215	15	4	13	5	21	16	10
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	23	601		27	917			88			188	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.182			0.441	
Prop RTs		0.007			0.064			0.239			0.218	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
Unit Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4		5	6	7	8
	Left	P			NB	Left	A		
	Thru	P				Thru	A		
	Right	P				Right	A		
	Peds					Peds			
WB	Left	P			SB	Left	A		
	Thru	P				Thru	A		
	Right	P				Right	A		
	Peds					Peds			
NB	Right				EB	Right			
SB	Right				WB	Right			
Green		66.2				12.7			
Yellow		3.8				3.3			
All Red		2.0				2.0			

Cycle Length: 90.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	17	448	3	22	695	48	13	41	17	65	50	32
PHF	0.75	0.75	0.75	0.81	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.78
Adj flow	23	597	4	27	858	59	16	51	21	83	64	41
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	23	601		27	917			88			188	
Prop LTs	1.000	0.000		1.000	0.000			0.182			0.441	
Prop RTs		0.007			0.064			0.239			0.218	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.990			0.968			0.971	
fLT	0.235	1.000		0.392	1.000			0.912			0.807	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
b		1.000			1.000			1.000			1.000	
	409	1799		657	1845			1864			1604	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	23	409	0.06	0.76	309	0.07
Prot							
Perm							
Thru	TR	601	1799	0.33	0.76	1359	0.44
Right							
Westbound							
Prot							
Perm							
Left	L	27	657	0.04	0.76	496	0.05
Prot							
Perm							
Thru	TR	917	1845	# 0.50	0.76	1394	0.66
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	88	1864	0.05	0.16	290	0.30
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	188	1604	# 0.12	0.16	250	0.75
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.61
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.67

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.07	0.76	2.8	1.000	309	0.50	0.5	0.0	3.3	A		
TR	0.44	0.76	4.0	1.000	1359	0.50	1.0	0.0	5.1	A	5.0	A
Westbound												
L	0.05	0.76	2.8	1.000	496	0.50	0.2	0.0	3.0	A		
TR	0.66	0.76	5.3	1.000	1394	0.50	2.4	0.0	7.8	A	7.7	A
Northbound												
[illegible]	0.30	0.16	33.7	1.000	290	0.11	0.6	0.0	34.3	C	34.3	C
Southbound												

LTR	0.75	0.16	36.3	1.000	250	0.31	12.1	0.0	48.4	D	48.4	D

Intersection delay = 12.2 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

			EB	WB	NB	SB
Cycle length, C	90.0	sec				
Total actual green time for LT lane group, G (s)			66.2	66.2		
Effective permitted green time for LT lane group, g(s)			68.0	68.0		
Opposing effective green time, go (s)			68.0	68.0		
Number of lanes in LT lane group, N			1	1		
Number of lanes in opposing approach, No			1	1		
Adjusted LT flow rate, VLT (veh/h)			23	27		
Proportion of LT in LT lane group, PLT			1.000	1.000		
Proportion of LT in opposing flow, PLTo			0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)			917	601		
Lost time for LT lane group, tL			4.00	4.00		
Computation						
LT volume per cycle, LTC=VLTC/3600			0.57	0.68		
Opposing lane util. factor, fLUo			1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			22.92	15.02		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.24	0.24		
gq, (see Exhibit C16-4,5,6,7,8)			18.85	7.03		
gu=g-gq if gq>=gf, or = g-gf if gq<gf			49.15	60.97		
n=Max(gq-gf)/2,0)			9.42	3.51		
Ptho=1-PLTo			1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			1.00	1.00		
EL1 (refer to Exhibit C16-3)			3.07	2.29		
EL2=Max((1-Ptho**n)/Plto, 1.0)						
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.06	0.06		
gdiff=max(gq-gf,0)			0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.24	0.39		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)						
or flt=[fm+0.91(N-1)]/N**						
Left-turn adjustment, fLT			0.235	0.392		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

			EB	WB	NB	SB
Cycle length, C	90.0	sec				
Total actual green time for LT lane group, G (s)					12.7	12.7
Effective permitted green time for LT lane group, g(s)					14.0	14.0
Opposing effective green time, go (s)					14.0	14.0
Number of lanes in LT lane group, N					1	1
Number of lanes in opposing approach, No					1	1

Adjusted LT flow rate, VLT (veh/h)			16	83
Proportion of LT in LT lane group, PLT	0.000	0.000	0.182	0.441
Proportion of LT in opposing flow, PLTo			0.44	0.18
Adjusted opposing flow rate, Vo (veh/h)			188	88
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.40	2.08
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			4.70	2.20
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			3.8	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.84	0.84
gq, (see Exhibit C16-4,5,6,7,8)			9.43	3.53
gu=g-gq if gq>=gf, or = g-gf if gq<gf			4.57	10.47
n=Max(gq-gf)/2,0)			2.80	1.77
PTHo=1-PLTo			0.56	0.82
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.18	0.44
EL1 (refer to Exhibit C16-3)			1.68	1.51
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.82	1.64
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.17	0.21
gdiff=max(gq-gf,0)			5.60	3.53
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.91	0.81
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.912	0.807

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	90.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v						
v/c ratio from Capacity Worksheet, X						
Protected phase effective green interval, g (s)						
Opposing queue effective green interval, gq						
Unopposed green interval, gu						
Red time r=(C-g-gq-gu)						
Arrival rate, qa=v/(3600(max[X,1.0]))						
Protected ph. departure rate, Sp=s/3600						
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)						
XPerm						
XProt						
Case						
Queue at beginning of green arrow, Qa						
Queue at beginning of unsaturated green, Qu						
Residual queue, Qr						
Uniform Delay, d1						

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 12.2 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR		LTR			LTR		
Init Queue	0.0	0.0		0.0	0.0		0.0			0.0		
Flow Rate	23	601		27	917		88			188		
So	1900	1900		1900	1900		1900			1900		
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
SL	409	1799		657	1845			1864			1604	
Capacity	309	1359		496	1394			290			250	
Flow Ratio	0.06	0.33		0.04	0.50			0.05			0.12	
v/c Ratio	0.07	0.44		0.05	0.66			0.30			0.75	
Grn Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.1	5.5		0.2	11.1			1.9			4.5	
kB	0.5	1.4		0.7	1.4			0.3			0.3	
Q2	0.0	1.1		0.0	2.7			0.1			0.8	
Q Average	0.2	6.6		0.2	13.8			2.1			5.3	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.0	0.2		0.1	0.3			0.1			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.2	8.1		0.3	16.6			2.5			6.3	
QSRatio	0.0	0.2		0.1	0.4			0.2			0.2	
85th Percentile Output:												
fB%	1.7	1.5		1.7	1.4			1.6			1.6	
BOQ	0.3	9.8		0.4	19.6			3.3			8.2	
QSRatio	0.1	0.2		0.1	0.5			0.2			0.2	
90th Percentile Output:												
fB%	2.0	1.6		2.0	1.5			1.8			1.7	
BOQ	0.4	10.8		0.4	21.1			3.7			9.1	
QSRatio	0.1	0.3		0.1	0.5			0.2			0.2	
95th Percentile Output:												
fB%	2.6	1.9		2.6	1.7			2.0			1.9	
BOQ	0.5	12.4		0.5	22.9			4.3			10.3	
QSRatio	0.1	0.3		0.1	0.6			0.3			0.3	
98th Percentile Output:												
fB%	3.1	2.1		3.1	1.8			2.6			2.4	
BOQ	0.6	13.9		0.7	24.8			5.3			12.6	
QSRatio	0.1	0.3		0.2	0.6			0.4			0.3	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: NO BUILD PM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	30	815	8	20	560	8	17	89	49	59	60	21
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P				NB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		69.2						19.7			
Yellow		3.8						3.3			
All Red		2.0						2.0			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	419	590	0.09	0.71	4.9	A		
TR	1277	1798	0.85	0.71	17.7	B	17.3	B
Westbound								
L	146	205	0.16	0.71	7.0	A		
TR	1320	1859	0.50	0.71	7.9	A	7.8	A
Northbound								
LTR	407	1940	0.46	0.21	35.3	D	35.3	D
Southbound								
LTR	294	1400	0.52	0.21	36.6	D	36.6	D

Intersection Delay = 17.2 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: NO BUILD PM PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	30	815	8	20	560	8	17	89	49	59	60	21
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.76	0.76	0.76	0.86	0.86	0.86	0.83	0.83	0.83	0.92	0.92	0.92
PHF 15 Vol	10	268	3	6	163	2	5	27	15	16	16	6
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	39	1083		23	660			186			152	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.108			0.421	
Prop RTs		0.010			0.014			0.317			0.151	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
Unit Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Phase		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
[illegible]	Left	P				NB	Left	A			
[illegible]	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				

Green	69.2	19.7
Yellow	3.8	3.3
All Red	2.0	2.0

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
[illegible]ume, V	30	815	8	20	560	8	17	89	49	59	60	21
[illegible]HF	0.76	0.76	0.76	0.86	0.86	0.86	0.83	0.83	0.83	0.92	0.92	0.92
Adj flow	39	1072	11	23	651	9	20	107	59	64	65	23
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	39	1083		23	660			186			152	
Prop LTs	1.000	0.000		1.000	0.000			0.108			0.421	
Prop RTs		0.010			0.014			0.317			0.151	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.998			0.998			0.957			0.980	
fLT	0.339	1.000		0.122	1.000			0.960			0.697	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
f[illegible]b		1.000			1.000			1.000			1.000	
[illegible]	590	1798		205	1859			1940			1400	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	39	590	0.07	0.71	419	0.09
Prot							
Perm							
Thru	TR	1083	1798	# 0.60	0.71	1277	0.85
Right							
Westbound							
Prot							
Perm							
Left	L	23	205	0.11	0.71	146	0.16
Prot							
Perm							
Thru	TR	660	1859	0.36	0.71	1320	0.50
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	186	1940	0.10	0.21	407	0.46
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	152	1400	# 0.11	0.21	294	0.52
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.71
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.77

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.09	0.71	4.5	1.000	419	0.50	0.4	0.0	4.9	A		
TR	0.85	0.71	10.6	1.000	1277	0.50	7.1	0.0	17.7	B	17.3	B
Westbound												
L	0.16	0.71	4.7	1.000	146	0.50	2.3	0.0	7.0	A		
TR	0.50	0.71	6.5	1.000	1320	0.50	1.4	0.0	7.9	A	7.8	A
Northbound												
	0.46	0.21	34.5	1.000	407	0.11	0.8	0.0	35.3	D	35.3	D
Southbound												

LTR	0.52	0.21	35.0	1.000	294	0.12	1.6	0.0	36.6	D	36.6	D

Intersection delay = 17.2 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)		69.2	69.2		
Effective permitted green time for LT lane group, g(s)		71.0	71.0		
Opposing effective green time, go (s)		71.0	71.0		
Number of lanes in LT lane group, N		1	1		
Number of lanes in opposing approach, No		1	1		
Adjusted LT flow rate, VLT (veh/h)		39	23		
Proportion of LT in LT lane group, PLT		1.000	1.000		
Proportion of LT in opposing flow, PLTo		0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)		660	1083		
Lost time for LT lane group, tL		4.00	4.00		
Computation					
LT volume per cycle, LTC=VLTC/3600		1.08	0.64		
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		18.33	30.08		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.29	0.29		
gq, (see Exhibit C16-4,5,6,7,8)		12.79	39.80		
gu=g-gq if gq>=gf, or = g-gf if gq<gf		58.21	31.20		
r -Max(gq-gf)/2,0)		6.39	19.90		
.o=1-PLTo		1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00		
EL1 (refer to Exhibit C16-3)		2.42	3.59		
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.06	0.06		
gdiff=max(gq-gf,0)		0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.34	0.12		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.339	0.122		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)				19.7	19.7
ective permitted green time for LT lane group, g(s)				21.0	21.0
posing effective green time, go (s)				21.0	21.0
Number of lanes in LT lane group, N				1	1
Number of lanes in opposing approach, No				1	1

Adjusted LT flow rate, VLT (veh/h)			20	64
Proportion of LT in LT lane group, PLT	0.000	0.000	0.108	0.421
Proportion of LT in opposing flow, PLTo			0.42	0.11
Adjusted opposing flow rate, Vo (veh/h)			152	186
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.56	1.78
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			4.22	5.17
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			6.9	1.7
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.79	0.79
gq, (see Exhibit C16-4,5,6,7,8)			7.54	9.45
gu=g-gq if gq>=gf, or = g-gf if gq<gf			13.46	11.55
n=Max(gq-gf)/2,0)			0.33	3.86
PTHo=1-PLTo			0.58	0.89
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.11	0.42
EL1 (refer to Exhibit C16-3)			1.62	1.67
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.00	3.31
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.11	0.14
gdiff=max(gq-gf,0)			0.66	7.72
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.96	0.70
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.960	0.697

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	100.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v					
v/c ratio from Capacity Worksheet, X					
Protected phase effective green interval, g (s)					
Opposing queue effective green interval, gq					
Unopposed green interval, gu					
Red time r=(C-g-gq-gu)					
Arrival rate, qa=v/(3600(max[X,1.0]))					
Protected ph. departure rate, Sp=s/3600					
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)					
XPerm					
XProt					
Case					
Queue at beginning of green arrow, Qa					
Queue at beginning of unsaturated green, Qu					
Residual queue, Qr					
Uniform Delay, d1					

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 17.2 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR			LTR			LTR	
Init Queue	0.0	0.0		0.0	0.0			0.0			0.0	
Flow Rate	39	1083		23	660			186			152	
So	1900	1900		1900	1900			1900			1900	
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
SL	590	1798		205	1859			1940			1400	
Capacity	419	1277		146	1320			407			294	
Flow Ratio	0.07	0.60		0.11	0.36			0.10			0.11	
v/c Ratio	0.09	0.85		0.16	0.50			0.46			0.52	
Grn Ratio	0.71	0.71		0.71	0.71			0.21			0.21	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.3	21.9		0.2	8.2			4.5			3.7	
kB	0.7	1.5		0.3	1.5			0.4			0.4	
Q2	0.1	6.4		0.1	1.5			0.4			0.4	
Q Average	0.4	28.4		0.3	9.7			4.9			4.1	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.1	0.7		0.1	0.2			0.3			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.5	34.0		0.3	11.8			5.8			4.9	
QSRatio	0.1	0.9		0.1	0.3			0.4			0.1	
85th Percentile Output:												
fB%	1.7	1.4		1.7	1.4			1.6			1.6	
BOQ	0.7	39.7		0.5	14.0			7.6			6.4	
QSRatio	0.1	1.0		0.1	0.4			0.5			0.2	
90th Percentile Output:												
fB%	2.0	1.5		2.0	1.6			1.7			1.7	
BOQ	0.8	42.6		0.5	15.3			8.3			7.1	
QSRatio	0.2	1.1		0.1	0.4			0.6			0.2	
95th Percentile Output:												
fB%	2.5	1.6		2.5	1.7			2.0			2.0	
BOQ	1.0	45.5		0.7	16.9			9.5			8.1	
QSRatio	0.2	1.1		0.2	0.4			0.6			0.2	
98th Percentile Output:												
fB%	3.1	1.7		3.1	1.9			2.4			2.4	
BOQ	1.2	48.4		0.8	18.6			11.6			10.0	
QSRatio	0.2	1.2		0.2	0.5			0.8			0.2	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: NO BUILD SAT PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	23	585	3	20	660	44	17	50	37	54	61	24
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
en	44.2						14.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	317	482	0.08	0.66	4.8	A		
TR	1182	1799	0.51	0.66	7.8	A	7.7	A
Westbound								
L	394	600	0.05	0.66	4.5	A		
TR	1212	1845	0.61	0.66	9.2	A	9.1	A
Northbound								
LTR	430	1881	0.32	0.23	22.9	C	22.9	C
Southbound								
LTR	386	1687	0.44	0.23	23.9	C	23.9	C

Intersection Delay = 11.2 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: NO BUILD SAT PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	585	3	20	660	44	17	50	37	54	61	24
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.75	0.75	0.75	0.82	0.82	0.82
PHF 15 Vol	6	151	1	5	174	12	6	17	12	16	19	7
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	24	606		21	741			139			169	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.165			0.391	
Prop RTs		0.005			0.062			0.353			0.172	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
Unit Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
Left	P				NB Left	A		
Thru	P				Thru	A		
Right	P				Right	A		
Peds					Peds			
WB Left	P				SB Left	A		
Thru	P				Thru	A		
Right	P				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	44.2				14.7			
Yellow	3.8				3.3			
All Red	2.0				2.0			

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	23	585	3	20	660	44	17	50	37	54	61	24
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.75	0.75	0.75	0.82	0.82	0.82
Adj flow	24	603	3	21	695	46	23	67	49	66	74	29
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	24	606		21	741			139			169	
Prop LTs	1.000	0.000		1.000	0.000			0.165			0.391	
Prop RTs		0.005			0.062			0.353			0.172	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.991			0.952			0.977	
fLT	0.277	1.000		0.358	1.000			0.936			0.843	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
b		1.000			1.000			1.000			1.000	
	482	1799		600	1845			1881			1687	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	24	482	0.05	0.66	317	0.08
Prot							
Perm							
Thru	TR	606	1799	0.34	0.66	1182	0.51
Right							
Westbound							
Prot							
Perm							
Left	L	21	600	0.04	0.66	394	0.05
Prot							
Perm							
Thru	TR	741	1845	# 0.40	0.66	1212	0.61
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	139	1881	0.07	0.23	430	0.32
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	169	1687	# 0.10	0.23	386	0.44
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.50
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.57

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.08	0.66	4.3	1.000	317	0.50	0.5	0.0	4.8	A		
TR	0.51	0.66	6.2	1.000	1182	0.50	1.6	0.0	7.8	A	7.7	A
Westbound												
L	0.05	0.66	4.3	1.000	394	0.50	0.3	0.0	4.5	A		
TR	0.61	0.66	6.9	1.000	1212	0.50	2.3	0.0	9.2	A	9.1	A
Northbound												
	0.32	0.23	22.5	1.000	430	0.11	0.4	0.0	22.9	C	22.9	C
Southbound												

LTR	0.44	0.23	23.1	1.000	386	0.11	0.8	0.0	23.9	C	23.9	C

Intersection delay = 11.2 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

			EB	WB	NB	SB
Cycle length, C	70.0	sec				
Total actual green time for LT lane group, G (s)			44.2	44.2		
Effective permitted green time for LT lane group, g(s)			46.0	46.0		
Opposing effective green time, go (s)			46.0	46.0		
Number of lanes in LT lane group, N			1	1		
Number of lanes in opposing approach, No			1	1		
Adjusted LT flow rate, VLT (veh/h)			24	21		
Proportion of LT in LT lane group, PLT			1.000	1.000		
Proportion of LT in opposing flow, PLTo			0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)			741	606		
Lost time for LT lane group, tL			4.00	4.00		
Computation						
LT volume per cycle, LTC=VLTC/3600			0.47	0.41		
Opposing lane util. factor, fLUo			1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			14.41	11.78		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.34	0.34		
gq, (see Exhibit C16-4,5,6,7,8)			12.79	8.18		
gu=g-gq if gq>=gf, or = g-gf if gq<gf			33.21	37.82		
[illegible]ax(gq-gf)/2,0)			6.40	4.09		
[illegible]o=1-PLTo			1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			1.00	1.00		
EL1 (refer to Exhibit C16-3)			2.60	2.30		
EL2=Max((1-Ptho**n)/Plto, 1.0)						
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.09	0.09		
gdiff=max(gq-gf,0)			0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.28	0.36		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)						
or flt=[fm+0.91(N-1)]/N**						
Left-turn adjustment, fLT			0.277	0.358		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

			EB	WB	NB	SB
Cycle length, C	70.0	sec				
Total actual green time for LT lane group, G (s)					14.7	14.7
[illegible]ective permitted green time for LT lane group, g(s)					16.0	16.0
[illegible]posing effective green time, go (s)					16.0	16.0
Number of lanes in LT lane group, N					1	1
Number of lanes in opposing approach, No					1	1

Adjusted LT flow rate, VLT (veh/h)			23	66
Proportion of LT in LT lane group, PLT	0.000	0.000	0.165	0.391
Proportion of LT in opposing flow, PLTo			0.39	0.17
Adjusted opposing flow rate, Vo (veh/h)			169	139
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.45	1.28
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			3.29	2.70
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			4.8	1.4
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.77	0.77
gq, (see Exhibit C16-4,5,6,7,8)			5.29	4.01
gu=g-gq if gq>=gf, or = g-gf if gq<gf			10.71	11.99
n=Max(gq-gf)/2,0)			0.27	1.32
PTHo=1-PLTo			0.61	0.83
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.17	0.39
EL1 (refer to Exhibit C16-3)			1.64	1.59
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.00	1.28
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.15	0.17
gdiff=max(gq-gf,0)			0.54	2.63
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.94	0.84
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.936	0.843

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

* special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v						
v/c ratio from Capacity Worksheet, X						
Protected phase effective green interval, g (s)						
Opposing queue effective green interval, gq						
Unopposed green interval, gu						
Red time r=(C-g-gq-gu)						
Arrival rate, qa=v/(3600(max[X,1.0]))						
Protected ph. departure rate, Sp=s/3600						
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)						
XPerm						
XProt						
Case						
Queue at beginning of green arrow, Qa						
Queue at beginning of unsaturated green, Qu						
Residual queue, Qr						
Uniform Delay, d1						

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 11.2 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR		LTR		LTR	
Init Queue	0.0	0.0		0.0	0.0		0.0		0.0	
Flow Rate	24	606		21	741		139		169	
So	1900	1900		1900	1900		1900		1900	
No.Lanes	1	1	0	1	1	0	0 1	0	0 1	0
SL	482	1799		600	1845		1881		1687	
Capacity	317	1182		394	1212		430		386	
Low Ratio	0.05	0.34		0.04	0.40		0.07		0.10	
v/c Ratio	0.08	0.51		0.05	0.61		0.32		0.44	
Grn Ratio	0.66	0.66		0.66	0.66		0.23		0.23	
I Factor		1.000			1.000		1.000		1.000	
AT or PVG	3	3		3	3		3		3	
Pltn Ratio	1.00	1.00		1.00	1.00		1.00		1.00	
PF2	1.00	1.00		1.00	1.00		1.00		1.00	
Q1	0.2	6.1		0.1	8.3		2.3		2.8	
kB	0.4	1.1		0.5	1.1		0.4		0.3	
Q2	0.0	1.1		0.0	1.7		0.2		0.3	
Q Average	0.2	7.2		0.2	9.9		2.4		3.1	
Q Spacing	25.0	25.0		25.0	25.0		25.0		25.0	
Q Storage	125	1000		100	1000		375		1000	
Q S Ratio	0.0	0.2		0.0	0.2		0.2		0.1	
70th Percentile Output:										
fB%	1.3	1.2		1.3	1.2		1.2		1.2	
BOQ	0.3	8.8		0.2	12.1		2.9		3.7	
QSRatio	0.1	0.2		0.1	0.3		0.2		0.1	
85th Percentile Output:										
fB%	1.7	1.5		1.7	1.4		1.6		1.6	
BOQ	0.3	10.6		0.3	14.3		3.8		4.8	
QSRatio	0.1	0.3		0.1	0.4		0.3		0.1	
90th Percentile Output:										
fB%	2.0	1.6		2.0	1.6		1.8		1.7	
BOQ	0.4	11.7		0.3	15.6		4.2		5.4	
QSRatio	0.1	0.3		0.1	0.4		0.3		0.1	
95th Percentile Output:										
fB%	2.6	1.8		2.6	1.7		2.0		2.0	
BOQ	0.5	13.2		0.4	17.3		4.9		6.2	
QSRatio	0.1	0.3		0.1	0.4		0.3		0.2	
98th Percentile Output:										
fB%	3.1	2.1		3.1	1.9		2.5		2.5	
BOQ	0.6	14.8		0.5	18.9		6.1		7.7	
QSRatio	0.1	0.4		0.1	0.5		0.4		0.2	

ERROR MESSAGES

No errors to report.

APPENDIX F: CAPACITY ANALYSIS WORKSHEETS – BUILD CONDITIONS

I. Signalized Intersections

II. Unsignalized Intersections

I. Signalized Intersections

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: BUILD AM PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	149	353	63	85	549	103	87	443	46	59	415	147
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	P			NB	Left	A			
Thru	A	P				Thru	A			
Right	A	P				Right	A			
Peds						Peds				
WB Left		P			SB	Left	A			
Thru		P				Thru	A			
Right		P				Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
en	6.5	33.7					34.7			
ellow	3.0	3.8					3.8			
All Red	1.5	1.5					1.5			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	227	1593	0.70	0.52	28.1	C		
T	963	1863	0.39	0.52	13.4	B	17.0	B
R	736	1425	0.09	0.52	11.1	B		
Westbound								
L	369	936	0.25	0.39	19.9	B		
TR	717	1819	0.98	0.39	55.4	E	51.4	D
Northbound								
L	105	260	0.91	0.41	86.5	F		
TR	695	1714	0.77	0.41	28.6	C	37.4	D
Southbound								
L	148	366	0.43	0.41	21.2	C		
TR	702	1730	0.86	0.41	35.0+	D	33.7	C

Intersection Delay = 36.0 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: BUILD AM PEAK
Intersection: CR 11 @ CR 10
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	149	353	63	85	549	103	87	443	46	59	415	147
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93
PK 15 Vol	40	94	17	23	148	28	24	122	13	16	112	40
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	159	376	67	91	701		96	538		63	604	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.158			0.095			0.262	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
[illegible]	Left	A	P			NB	Left	A			
[illegible]	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		6.5	33.7					34.7			
Yellow		3.0	3.8					3.8			
All Red		1.5	1.5					1.5			

Cycle Length: 90.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
[illegible]ume, V	149	353	63	85	549	103	87	443	46	59	415	147
[illegible]	0.94	0.94	0.94	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93
Adj flow	159	376	67	91	590	111	96	487	51	63	446	158
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	159	376	67	91	701		96	538		63	604	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.158			0.095			0.262	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.976			0.986			0.961	
fLT	0.950	1.000		0.538	1.000		0.155	1.000		0.218	1.000	
Sec.	0.105											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
f[illegible]b		1.000	1.000		1.000			1.000			1.000	
[illegible]	1593	1863	1425	936	1819		260	1714		366	1730	
Sec.	176											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		147	1593	# 0.09	0.092	147	1.00
Perm		12	176	0.07	0.424	80	0.15
Left	L	159			0.52	227	0.70
Prot							
Perm							
Thru	T	376	1863	0.20	0.52	963	0.39
Right	R	67	1425	0.05	0.52	736	0.09
Westbound							
Prot							
Perm							
Left	L	91	936	0.10	0.39	369	0.25
Prot							
Perm							
Thru	TR	701	1819	# 0.39	0.39	717	0.98
Right							
Northbound							
Prot							
Perm							
Left	L	96	260	# 0.37	0.41	105	0.91
Prot							
Perm							
Thru	TR	538	1714	0.31	0.41	695	0.77
Right							
Southbound							
Prot							
Perm							
Left	L	63	366	0.17	0.41	148	0.43
Prot							
Perm							
Thru	TR	604	1730	0.35	0.41	702	0.86
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.85
Total lost time per cycle, L = 10.50 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.96

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.70	0.52	18.9	1.000	227	0.27	9.2	0.0	28.1	C		
T	0.39	0.52	13.2	1.000	963	0.11	0.3	0.0	13.4	B	17.0	B
R	0.09	0.52	11.0	1.000	736	0.11	0.1	0.0	11.1	B		
Westbound												
L	0.25	0.39	18.3	1.000	369	0.50	1.6	0.0	19.9	B		
TR	0.98	0.39	26.9	1.000	717	0.50	28.6	0.0	55.4	E	51.4	D
Northbound												
L	0.91	0.41	25.3	1.000	105	0.43	61.2	0.0	86.5	F		
[illegible]	0.77	0.41	23.2	1.000	695	0.32	5.5	0.0	28.6	C	37.4	D
Southbound												
L	0.43	0.41	19.2	1.000	148	0.11	2.0	0.0	21.2	C		

TR	0.86	0.41	24.4	1.000	702	0.39	10.6	0.0	35.0+	D	33.7	C

Intersection delay = 36.0 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Cycle length, C 90.0 sec				
Total actual green time for LT lane group, G (s)	44.7	33.7	34.7	34.7
Effective permitted green time for LT lane group, g(s)	38.2	35.5	36.5	36.5
Opposing effective green time, go (s)	35.5	46.5	36.5	36.5
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	1	1	1	1
Adjusted LT flow rate, VLT (veh/h)	159	91	96	63
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	701	376	604	538
Lost time for LT lane group, tL	3.50	3.50	3.50	3.50
Computation				
LT volume per cycle, LTC=VLTC/3600	3.98	2.28	2.40	1.58
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	17.52	9.40	15.10	13.45
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.61	0.48	0.59	0.59
gq, (see Exhibit C16-4,5,6,7,8)	34.20	0.00	23.52	19.31
gu=g-gq if gq>=gf, or = g-gf if gq<gf	4.00	35.50	12.98	17.19
n=Max(gq-gf)/2,0)	17.10	0.00	11.76	9.65
Pto=1-PLTo	1.00	1.00	1.00	1.00
Pl=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	2.51	1.86	2.29	2.16
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.10	0.11	0.11	0.11
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.10	0.54	0.16	0.22
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.105	0.538	0.155	0.218

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Cycle length, C 90.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				

Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
* volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 1.00 1.00 1.00 1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

_____SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET_____

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
Capedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
r ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	90.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		159			
v/c ratio from Capacity Worksheet, X		0.70			
Protected phase effective green interval, g (s)		8.3			
Opposing queue effective green interval, gq		34.20			
Unopposed green interval, gu		4.00			
Red time r=(C-g-gq-gu)		43.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.04			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.47			
XPerm		0.90			
XProt		0.62			
Case		1			
Queue at beginning of green arrow, Qa		1.92			
Queue at beginning of unsaturated green, Qu		1.51			
Residual queue, Qr		0.00			
Uniform Delay, d1		18.9			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 36.0 sec/veh Intersection LOS D

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	159	376	67	91	701		96	538		63	604	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
SL	429	1863	1425	936	1819		260	1714		366	1730	
Capacity	227	963	736	369	717		105	695		148	702	
Flow Ratio	0.37	0.20	0.05	0.10	0.39		0.37	0.31		0.17	0.35	
v/c Ratio	0.70	0.39	0.09	0.25	0.98		0.91	0.77		0.43	0.86	
Grn Ratio	0.52	0.52	0.52	0.39	0.39		0.41	0.41		0.41	0.41	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	2.1	5.7	0.8	1.5	17.3		2.3	11.7		1.1	13.8	
kB	0.3	0.7	0.6	0.6	0.9		0.2	0.6		0.2	0.6	
Q2	0.6	0.4	0.1	0.2	8.0		1.0	1.7		0.2	2.8	
Q Average	2.7	6.1	0.9	1.7	25.2		3.3	13.4		1.3	16.6	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	0.9	0.2	0.2	0.4	6.3		0.8	1.1		0.3	0.4	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.2		1.2	1.2	
BOQ	3.2	7.3	1.1	2.2	30.3		3.9	15.7		1.5	19.3	
QSRatio	1.1	0.2	0.3	0.5	7.6		1.0	1.3		0.4	0.5	
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4		1.6	1.5		1.6	1.5	
BOQ	4.2	9.5	1.4	2.8	35.4		5.1	20.0		2.1	24.4	
QSRatio	1.4	0.2	0.4	0.6	8.8		1.3	1.7		0.5	0.6	
90th Percentile Output:												
fB%	1.8	1.7	1.8	1.9	1.5		1.7	1.6		1.8	1.6	
BOQ	4.7	10.4	1.6	3.2	37.9		5.7	21.5		2.3	26.1	
QSRatio	1.6	0.3	0.4	0.7	9.5		1.4	1.8		0.6	0.7	
95th Percentile Output:												
fB%	2.0	1.9	2.1	2.3	1.6		2.0	1.8		2.1	1.7	
BOQ	5.4	11.8	1.9	4.0	40.5		6.5	23.9		2.7	28.8	
QSRatio	1.8	0.3	0.5	0.9	10.1		1.6	2.0		0.7	0.7	
98th Percentile Output:												
fB%	2.5	2.3	2.6	2.8	1.7		2.5	2.1		2.6	2.0	
BOQ	6.7	14.2	2.4	4.7	43.1		8.1	27.6		3.4	32.8	
QSRatio	2.2	0.4	0.6	1.0	10.8		2.0	2.3		0.8	0.8	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: BUILD PM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	244	626	73	80	417	122	84	682	52	87	411	121
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	P			NB	Left	A			
Thru	A	P				Thru	A			
Right	A	P				Right	A			
Peds						Peds				
WB Left		P			SB	Left	A			
Thru		P				Thru	A			
Right		P				Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	6.5	35.7					42.7			
Yellow	3.5	3.8					3.8			
All Red	1.0	1.5					1.5			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	204	1593	1.26	0.49	176.8	F		
T	904	1863	0.73	0.49	23.5	C	62.5	E
R	691	1425	0.11	0.49	14.1	B		
Westbound								
L	161	428	0.58	0.38	39.6	D		
TR	675	1799	0.94	0.38	53.0	D	51.3	D
Northbound								
L	162	365	0.56	0.44	24.6	C		
TR	765	1720	1.03	0.44	68.6	E	64.1	E
Southbound								
L	72	151	1.32	0.44	241.1	F		
TR	774	1739	0.75	0.44	27.1	C	57.3	E

Intersection Delay = 59.3 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: BUILD PM PEAK
Intersection: CR 11 @ CR 10
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	244	626	73	80	417	122	84	682	52	87	411	121
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92
15 Vol	64	165	19	24	123	36	23	183	14	24	112	33
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	257	659	77	94	635		90	789		95	579	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.227			0.071			0.228	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
t Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		6.5	35.7					42.7			
Yellow		3.5	3.8					3.8			
All Red		1.0	1.5					1.5			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	244	626	73	80	417	122	84	682	52	87	411	121
PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92
Adj flow	257	659	77	94	491	144	90	733	56	95	447	132
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	257	659	77	94	635		90	789		95	579	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.227			0.071			0.228	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.966			0.989			0.966	
fLT	0.950	1.000		0.246	1.000		0.217	1.000		0.090	1.000	
Sec.	0.100											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
b		1.000	1.000		1.000			1.000			1.000	
s	1593	1863	1425	428	1799		365	1720		151	1739	
Sec.	167											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		132	1593	# 0.08	0.083	132	1.00
Perm		125	167	# 0.75	0.402	72	1.74
Left	L	257			0.49	204	1.26
Prot							
Perm							
Thru	T	659	1863	0.35	0.49	904	0.73
Right	R	77	1425	0.05	0.49	691	0.11
Westbound							
Prot							
Perm							
Left	L	94	428	0.22	0.38	161	0.58
Prot							
Perm							
Thru	TR	635	1799	0.35	0.38	675	0.94
Right							
Northbound							
Prot							
Perm							
Left	L	90	365	0.25	0.44	162	0.56
Prot							
Perm							
Thru	TR	789	1720	0.46	0.44	765	1.03
Right							
Southbound							
Prot							
Perm							
Left	L	95	151	# 0.63	0.44	72	1.32
Prot							
Perm							
Thru	TR	579	1739	0.33	0.44	774	0.75
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 1.46
Total lost time per cycle, L = 7.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 1.57

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	1.26	0.49	26.6	1.000	204	0.50	150.2	0.0	176.8	F		
T	0.73	0.49	20.5	1.000	904	0.29	3.0	0.0	23.5	C	62.5	E
R	0.11	0.49	14.0	1.000	691	0.11	0.1	0.0	14.1	B		
Westbound												
L	0.58	0.38	25.0	1.000	161	0.50	14.6	0.0	39.6	D		
TR	0.94	0.38	30.2	1.000	675	0.50	22.8	0.0	53.0	D	51.3	D
Northbound												
L	0.56	0.44	20.5	1.000	162	0.15	4.2	0.0	24.6	C		
	1.03	0.44	27.8	1.000	765	0.50	40.9	0.0	68.6	E	64.1	E
Southbound												
L	1.32	0.44	27.8	1.000	72	0.50	213.3	0.0	241.1	F		

TR	0.75	0.44	23.1	1.000	774	0.30	4.0	0.0	27.1	C	57.3	E

Intersection delay = 59.3 (sec/veh) Intersection LOS = E

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Cycle length, C 100.0 sec				
Total actual green time for LT lane group, G (s)	46.7	35.7	42.7	42.7
Effective permitted green time for LT lane group, g(s)	40.2	37.5	44.5	44.5
Opposing effective green time, go (s)	37.5	48.5	44.5	44.5
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	1	1	1	1
Adjusted LT flow rate, VLT (veh/h)	257	94	90	95
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	635	659	579	789
Lost time for LT lane group, tL	3.50	3.50	3.50	3.50
Computation				
LT volume per cycle, LTC=VLTC/3600	7.14	2.61	2.50	2.64
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	17.64	18.31	16.08	21.92
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.63	0.51	0.56	0.56
gq, (see Exhibit C16-4,5,6,7,8)	34.07	15.24	22.82	39.81
gu=g-gq if gq>=gf, or = g-gf if gq<gf	6.13	22.26	21.68	4.69
[illegible] Max(gq-gf)/2,0)	17.03	7.62	11.41	19.91
[illegible]o=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	2.36	2.41	2.24	2.72
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.10	0.11	0.09	0.09
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.10	0.25	0.22	0.09
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.100	0.246	0.217	0.090

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Cycle length, C 100.0 sec				
Total actual green time for LT lane group, G (s)				
[illegible]ective permitted green time for LT lane group, g(s)				
[illegible]posing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				

Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
I volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 1.00 1.00 1.00 1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
F ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	100.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		257			
v/c ratio from Capacity Worksheet, X		1.26			
Protected phase effective green interval, g (s)		8.3			
Opposing queue effective green interval, gq		34.07			
Unopposed green interval, gu		6.13			
Red time r=(C-g-gq-gu)		51.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.06			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.30			
XPerm		1.22			
XProt		0.92			
Case		3			
Queue at beginning of green arrow, Qa		3.33			
Queue at beginning of unsaturated green, Qu		1.93			
Residual queue, Qr		0.41			
Uniform Delay, d1		26.6			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

c/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 59.3 sec/veh Intersection LOS E

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	257	659	77	94	635		90	789		95	579	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
SL	411	1863	1425	428	1799		365	1720		151	1739	
apacity	204	904	691	161	675		162	765		72	774	
ow Ratio	0.63	0.35	0.05	0.22	0.35		0.25	0.46		0.63	0.33	
v/c Ratio	1.26	0.73	0.11	0.58	0.94		0.56	1.03		1.32	0.75	
Grn Ratio	0.49	0.49	0.49	0.38	0.38		0.44	0.44		0.44	0.44	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	4.0	14.6	1.2	2.1	17.0		1.8	21.9		2.6	13.4	
kB	0.3	0.7	0.6	0.3	0.9		0.2	0.6		0.1	0.6	
Q2	7.8	1.8	0.1	0.5	6.5		0.3	9.5		3.4	1.7	
Q Average	11.8	16.3	1.2	2.5	23.5		2.1	31.4		6.0	15.1	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	3.9	0.4	0.3	0.6	5.9		0.5	2.6		1.5	0.4	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.1		1.2	1.2	
BOQ	13.8	19.1	1.5	3.2	28.2		2.6	36.0		7.1	17.7	
QSRatio	4.6	0.5	0.4	0.7	7.1		0.6	3.0		1.8	0.4	
85th Percentile Output:												
fB%	1.5	1.5	1.6	1.6	1.4		1.6	1.4		1.5	1.5	
BOQ	17.7	24.1	2.0	4.0	33.0		3.4	44.1		9.3	22.4	
QSRatio	5.9	0.6	0.5	0.9	8.2		0.8	3.7		2.3	0.6	
90th Percentile Output:												
fB%	1.6	1.6	1.8	1.8	1.5		1.8	1.5		1.7	1.6	
BOQ	19.1	25.8	2.2	4.6	35.4		3.8	46.6		10.2	24.0	
atio	6.4	0.6	0.5	1.0	8.8		0.9	3.9		2.6	0.6	
95th Percentile Output:												
fB%	1.8	1.7	2.1	2.2	1.6		2.0	1.6		1.9	1.8	
BOQ	21.4	28.5	2.6	5.6	37.8		4.4	50.4		11.6	26.6	
QSRatio	7.1	0.7	0.6	1.2	9.5		1.1	4.2		2.9	0.7	
98th Percentile Output:												
fB%	2.1	2.0	2.6	2.6	1.7		2.5	1.8		2.3	2.0	
BOQ	24.8	32.4	3.2	6.6	40.3		5.5	56.2		14.0	30.4	
QSRatio	8.3	0.8	0.8	1.4	10.1		1.4	4.7		3.5	0.8	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: BUILD SAT PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ CR 10
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: ELWOOD ROAD (CR 10)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	169	469	66	93	390	81	143	621	80	60	499	177
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	P			NB	Left	A			
Thru	A	P				Thru	A			
Right	A	P				Right	A			
Peds						Peds				
WB Left		P			SB	Left	A			
Thru		P				Thru	A			
Right		P				Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	7.5	17.7					29.7			
Yellow	3.0	3.8					3.8			
All Red	1.5	1.5					1.5			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	315	1593	0.59	0.45	17.6	B		
T	838	1863	0.61	0.45	16.0	B	15.9	B
R	641	1425	0.11	0.45	11.2	B		
Westbound								
L	229	823	0.51	0.28	29.0	C		
TR	506	1815	1.16	0.28	118.2	F	103.5	F
Northbound								
L	103	213	1.52	0.45	298.2	F		
TR	769	1709	1.00	0.45	52.0	D	93.7	F
Southbound								
L	103	213	0.63	0.45	26.6	C		
TR	778	1730	0.94	0.45	38.2	D	37.3	D

Intersection Delay = 63.0 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: BUILD SAT PEAK
Intersection: CR 11 @ CR 10
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: ELWOOD ROAD (CR 10)

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	169	469	66	93	390	81	143	621	80	60	499	177
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.91	0.91	0.91	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92
PK 15 Vol	46	129	18	29	122	25	39	171	22	16	136	48
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900		1900	1900		1900	1900	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Lane Width	9.0	12.0	9.0	10.0	12.0		9.0	10.0		9.0	11.0	
RTOR Vol			0			0			0			0
Adj Flow	186	515	73	116	588		157	770		65	734	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.172			0.114			0.262	
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase	0.0											
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	3	3	3	3	3		3	3		3	3	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	3.8	3.8	3.8	3.8	3.8		3.8	3.8		3.8	3.8	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	A	P			NB	Left	A			
	Thru	A	P				Thru	A			
	Right	A	P				Right	A			
	Peds						Peds				
WB	Left		P			SB	Left	A			
	Thru		P				Thru	A			
	Right		P				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		7.5	17.7					29.7			
Yellow		3.0	3.8					3.8			
All Red		1.5	1.5					1.5			

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	169	469	66	93	390	81	143	621	80	60	499	177
PHF	0.91	0.91	0.91	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92
Adj flow	186	515	73	116	487	101	157	682	88	65	542	192
No. Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj flow	186	515	73	116	588		157	770		65	734	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.172			0.114			0.262	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	TR		L	TR		L	TR	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
fW	0.900	1.000	0.900	0.933	1.000		0.900	0.933		0.900	0.967	
fHV	0.980	0.980	0.980	0.980	0.980		0.980	0.980		0.980	0.980	
fG	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fP	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fBB	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fA	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fLU	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
fRT		1.000	0.850		0.974			0.983			0.961	
fLT	0.950	1.000		0.474	1.000		0.127	1.000		0.127	1.000	
Sec.	0.180											
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
f b		1.000	1.000		1.000			1.000			1.000	
	1593	1863	1425	823	1815		213	1709		213	1730	
Sec.	302											

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		186	1593	# 0.12	0.133	212	0.88
Perm		0	302	0.00	0.317	103	0.00
Left	L	186			0.45	315	0.59
Prot							
Perm							
Thru	T	515	1863	0.28	0.45	838	0.61
Right	R	73	1425	0.05	0.45	641	0.11
Westbound							
Prot							
Perm							
Left	L	116	823	0.14	0.28	229	0.51
Prot							
Perm							
Thru	TR	588	1815	# 0.32	0.28	506	1.16
Right							
Northbound							
Prot							
Perm							
Left	L	157	213	# 0.74	0.45	103	1.52
Prot							
Perm							
Thru	TR	770	1709	0.45	0.45	769	1.00
Right							
Southbound							
Prot							
Perm							
Left	L	65	213	0.31	0.45	103	0.63
Prot							
Perm							
Thru	TR	734	1730	0.42	0.45	778	0.94
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 1.18
Total lost time per cycle, L = 10.50 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 1.39

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.59	0.45	14.6	1.000	315	0.18	2.9	0.0	17.6	B		
T	0.61	0.45	14.6	1.000	838	0.20	1.4	0.0	16.0	B	15.9	B
R	0.11	0.45	11.2	1.000	641	0.11	0.1	0.0	11.2	B		
Westbound												
L	0.51	0.28	21.2	1.000	229	0.50	7.8	0.0	29.0	C		
TR	1.16	0.28	25.3	1.000	506	0.50	92.9	0.0	118.2	F	103.5	F
Northbound												
L	1.52	0.45	19.3	1.000	103	0.50	278.9	0.0	298.2	F		
[illegible]	1.00	0.45	19.3	1.000	769	0.50	32.8	0.0	52.0	D	93.7	F
Southbound												
L	0.63	0.45	14.8	1.000	103	0.21	11.8	0.0	26.6	C		

TR	0.94	0.45	18.4	1.000	778	0.46	19.8	0.0	38.2	D	37.3	D

Intersection delay = 63.0 (sec/veh) Intersection LOS = E

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	70.0 sec				
Total actual green time for LT lane group, G (s)		29.7	17.7	29.7	29.7
Effective permitted green time for LT lane group, g(s)		22.2	19.5	31.5	31.5
Opposing effective green time, go (s)		19.5	31.5	31.5	31.5
Number of lanes in LT lane group, N		1	1	1	1
Number of lanes in opposing approach, No		1	1	1	1
Adjusted LT flow rate, VLT (veh/h)		186	116	157	65
Proportion of LT in LT lane group, PLT		1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo		0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)		588	515	734	770
Lost time for LT lane group, tL		3.50	3.50	3.50	3.50
Computation					
LT volume per cycle, LTC=VLTC/3600		3.62	2.26	3.05	1.26
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, VoLc=VoC/[3600(No)fLUo] (veh/ln/cyc)		11.43	10.01	14.27	14.97
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.72	0.55	0.55	0.55
gq, (see Exhibit C16-4,5,6,7,8)		18.20	0.00	23.01	25.28
gu=g-gq if gq>=gf, or = g-gf if gq<gf		4.00	19.50	8.49	6.22
r=Max(gq-gf)/2,0)		9.10	0.00	11.50	12.64
[illegible]o=1-PLTo		1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)		2.26	2.11	2.59	2.68
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.18	0.21	0.13	0.13
gdiff=max(gq-gf,0)		0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.18	0.47	0.13	0.13
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.180	0.474	0.127	0.127

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	70.0 sec				
Total actual green time for LT lane group, G (s)					
[illegible]ective permitted green time for LT lane group, g(s)					
[illegible]osing effective green time, go (s)					
Number of lanes in LT lane group, N					
Number of lanes in opposing approach, No					

Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT	0.000	0.000	0.000	0.000
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
volume per cycle, LTC=VLTC/3600				
osing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
ective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
r ght turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		186			
v/c ratio from Capacity Worksheet, X		0.59			
Protected phase effective green interval, g (s)		9.3			
Opposing queue effective green interval, gq		18.20			
Unopposed green interval, gu		4.00			
Red time r=(C-g-gq-gu)		38.5			
Arrival rate, qa=v/(3600(max[X,1.0]))		0.05			
Protected ph. departure rate, Sp=s/3600		0.443			
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.47			
XPerm		0.62			
XProt		0.60			
Case		1			
Queue at beginning of green arrow, Qa		1.99			
Queue at beginning of unsaturated green, Qu		0.94			
Residual queue, Qr		0.00			
Uniform Delay, d1		14.6			

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 63.0 sec/veh Intersection LOS E

BACK OF QUEUE WORKSHEET

Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	T	R	L	TR		L	TR		L	TR	
Init Queue	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Flow Rate	186	515	73	116	588		157	770		65	734	
So	1900	1900	1900	1900	1900		1900	1900		1900	1900	
No.Lanes	1	1	1	1	1	0	1	1	0	1	1	0
SL	683	1863	1425	823	1815		213	1709		213	1730	
[illegible]apacity	315	838	641	229	506		103	769		103	778	
[illegible]w Ratio	0.27	0.28	0.05	0.14	0.32		0.74	0.45		0.31	0.42	
v/c Ratio	0.59	0.61	0.11	0.51	1.16		1.52	1.00		0.63	0.94	
Grn Ratio	0.45	0.45	0.45	0.28	0.28		0.45	0.45		0.45	0.45	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3		3	3		3	3	
Pltn Ratio	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
PF2	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Q1	2.2	7.6	0.8	1.9	11.4		3.1	15.0		1.0	13.6	
kB	0.3	0.5	0.5	0.3	0.6		0.1	0.5		0.1	0.5	
Q2	0.4	0.8	0.1	0.3	13.5		7.1	7.0		0.2	4.6	
Q Average	2.6	8.4	0.9	2.2	24.9		10.2	22.0		1.2	18.3	
Q Spacing	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Q Storage	75	1000	100	115	100		100	300		100	1000	
Q S Ratio	0.9	0.2	0.2	0.5	6.2		2.6	1.8		0.3	0.5	
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.3	1.2		1.2	1.2		1.2	1.2	
BOQ	3.1	10.0	1.1	2.8	29.9		12.0	25.5		1.4	21.3	
QSRatio	1.0	0.2	0.3	0.6	7.5		3.0	2.1		0.4	0.5	
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4		1.5	1.4		1.6	1.5	
BOQ	4.0	12.9	1.4	3.6	34.9		15.4	31.8		1.9	26.7	
QSRatio	1.3	0.3	0.4	0.8	8.7		3.9	2.6		0.5	0.7	
90th Percentile Output:												
fB%	1.8	1.7	1.8	1.8	1.5		1.6	1.5		1.8	1.6	
BOQ	4.5	14.0	1.6	4.1	37.5		16.7	33.8		2.1	28.5	
[illegible]atio	1.5	0.4	0.4	0.9	9.4		4.2	2.8		0.5	0.7	
95th Percentile Output:												
fB%	2.0	1.9	2.1	2.2	1.6		1.8	1.7		2.1	1.7	
BOQ	5.2	15.8	1.8	5.0	40.0		18.8	36.9		2.5	31.4	
QSRatio	1.7	0.4	0.5	1.1	10.0		4.7	3.1		0.6	0.8	
98th Percentile Output:												
fB%	2.5	2.2	2.6	2.7	1.7		2.2	1.9		2.6	1.9	
BOQ	6.5	18.8	2.3	5.9	42.6		22.0	41.5		3.2	35.5	
QSRatio	2.2	0.5	0.6	1.3	10.7		5.5	3.5		0.8	0.9	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: BUILD AM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	17	455	3	23	725	50	13	41	17	66	50	32
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	66.2						12.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	285	377	0.08	0.76	3.4	A		
TR	1359	1799	0.45	0.76	5.1	A	5.1	A
Westbound								
L	490	648	0.06	0.76	3.0	A		
TR	1394	1845	0.69	0.76	8.4	A	8.2	A
Northbound								
LTR	290	1863	0.30	0.16	34.3	C	34.3	C
Southbound								
LTR	249	1601	0.76	0.16	49.5	D	49.5	D

Intersection Delay = 12.5 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst:	REB
Agency/Co.:	RMS ENGINEERING
Date Performed:	6/30/2003
Analysis Time Period:	BUILD AM PEAK
Intersection:	CR 11 @ STONY HOLLOW ROAD
Area Type:	All other areas
Jurisdiction:	TOWN OF HUNTINGTON
Analysis Year:	2005

Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	17	455	3	23	725	50	13	41	17	66	50	32
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.75	0.75	0.75	0.81	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.78
15 Vol	6	152	1	7	224	15	4	13	5	21	16	10
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	23	611		28	957			88			190	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.182			0.447	
Prop RTs		0.007			0.065			0.239			0.216	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
t Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
ctor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	P				NB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				

Green	66.2	12.7
Yellow	3.8	3.3
All Red	2.0	2.0

Cycle Length: 90.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	17	455	3	23	725	50	13	41	17	66	50	32
PHF	0.75	0.75	0.75	0.81	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.78
Adj flow	23	607	4	28	895	62	16	51	21	85	64	41
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	23	611		28	957			88			190	
Prop LTs	1.000	0.000		1.000	0.000			0.182			0.447	
Prop RTs		0.007			0.065			0.239			0.216	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.990			0.968			0.971	
fLT	0.217	1.000		0.387	1.000			0.912			0.805	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
b		1.000			1.000			1.000			1.000	
	377	1799		648	1845			1863			1601	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	23	377	0.06	0.76	285	0.08
Prot							
Perm							
Thru	TR	611	1799	0.34	0.76	1359	0.45
Right							
Westbound							
Prot							
Perm							
Left	L	28	648	0.04	0.76	490	0.06
Prot							
Perm							
Thru	TR	957	1845	# 0.52	0.76	1394	0.69
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	88	1863	0.05	0.16	290	0.30
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	190	1601	# 0.12	0.16	249	0.76
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.64
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.70

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.08	0.76	2.9	1.000	285	0.50	0.6	0.0	3.4	A		
TR	0.45	0.76	4.1	1.000	1359	0.50	1.1	0.0	5.1	A	5.1	A
Westbound												
L	0.06	0.76	2.8	1.000	490	0.50	0.2	0.0	3.0	A		
TR	0.69	0.76	5.6	1.000	1394	0.50	2.8	0.0	8.4	A	8.2	A
Northbound												
R	0.30	0.16	33.7	1.000	290	0.11	0.6	0.0	34.3	C	34.3	C
Southbound												

LTR	0.76	0.16	36.4	1.000	249	0.32	13.1	0.0	49.5	D	49.5	D

Intersection delay = 12.5 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

			EB	WB	NB	SB
Cycle length, C	90.0	sec				
Total actual green time for LT lane group, G (s)			66.2	66.2		
Effective permitted green time for LT lane group, g(s)			68.0	68.0		
Opposing effective green time, go (s)			68.0	68.0		
Number of lanes in LT lane group, N			1	1		
Number of lanes in opposing approach, No			1	1		
Adjusted LT flow rate, VLT (veh/h)			23	28		
Proportion of LT in LT lane group, PLT			1.000	1.000		
Proportion of LT in opposing flow, PLTo			0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)			957	611		
Lost time for LT lane group, tL			4.00	4.00		
Computation						
LT volume per cycle, LTC=VLTC/3600			0.57	0.70		
Opposing lane util. factor, fLUo			1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			23.92	15.27		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.24	0.24		
gq, (see Exhibit C16-4,5,6,7,8)			20.98	7.31		
gu=g-gq if gq>=gf, or = g-gf if gq<gf			47.02	60.69		
n-Max(gq-gf)/2,0)			10.49	3.65		
[illegible]o=1-PLTo			1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			1.00	1.00		
EL1 (refer to Exhibit C16-3)			3.19	2.31		
EL2=Max((1-Ptho**n)/Plto, 1.0)						
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.06	0.06		
gdiff=max(gq-gf,0)			0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.22	0.39		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)						
or flt=[fm+0.91(N-1)]/N**						
Left-turn adjustment, fLT			0.217	0.387		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

			EB	WB	NB	SB
Cycle length, C	90.0	sec				
Total actual green time for LT lane group, G (s)					12.7	12.7
[illegible]ective permitted green time for LT lane group, g(s)					14.0	14.0
[illegible]osing effective green time, go (s)					14.0	14.0
Number of lanes in LT lane group, N					1	1
Number of lanes in opposing approach, No					1	1

Adjusted LT flow rate, VLT (veh/h)			16	85
Proportion of LT in LT lane group, PLT	0.000	0.000	0.182	0.447
Proportion of LT in opposing flow, PLTo			0.45	0.18
Adjusted opposing flow rate, Vo (veh/h)			190	88
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.40	2.13
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			4.75	2.20
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			3.8	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.84	0.84
gq, (see Exhibit C16-4,5,6,7,8)			9.54	3.53
gu=g-gq if gq>=gf, or = g-gf if gq<gf			4.46	10.47
n=Max(gq-gf)/2,0)			2.86	1.77
PTHo=1-PLTo			0.55	0.82
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.18	0.45
EL1 (refer to Exhibit C16-3)			1.68	1.51
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.82	1.64
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.17	0.21
gdiff=max(gq-gf,0)			5.71	3.53
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.91	0.80
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.912	0.805

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ght turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	90.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v						
v/c ratio from Capacity Worksheet, X						
Protected phase effective green interval, g (s)						
Opposing queue effective green interval, gq						
Unopposed green interval, gu						
Red time r=(C-g-gq-gu)						
Arrival rate, qa=v/(3600(max[X,1.0]))						
Protected ph. departure rate, Sp=s/3600						
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)						
XPerm						
XProt						
Case						
Queue at beginning of green arrow, Qa						
Queue at beginning of unsaturated green, Qu						
Residual queue, Qr						
Uniform Delay, dl						

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

or/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. dl sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 12.5 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR			LTR			LTR	
Init Queue	0.0	0.0		0.0	0.0			0.0			0.0	
Flow Rate	23	611		28	957			88			190	
So	1900	1900		1900	1900			1900			1900	
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
SL	377	1799		648	1845			1863			1601	
[illegible]apacity	285	1359		490	1394			290			249	
[illegible]ow Ratio	0.06	0.34		0.04	0.52			0.05			0.12	
v/c Ratio	0.08	0.45		0.06	0.69			0.30			0.76	
Grn Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.1	5.7		0.2	12.2			1.9			4.6	
kB	0.5	1.4		0.7	1.4			0.3			0.3	
Q2	0.0	1.1		0.0	3.0			0.1			0.9	
Q Average	0.2	6.8		0.2	15.1			2.1			5.4	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.0	0.2		0.1	0.4			0.1			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.2	8.3		0.3	18.2			2.5			6.4	
QSRatio	0.0	0.2		0.1	0.5			0.2			0.2	
85th Percentile Output:												
fB%	1.7	1.5		1.7	1.4			1.6			1.6	
BOQ	0.3	10.0		0.4	21.4			3.3			8.4	
QSRatio	0.1	0.3		0.1	0.5			0.2			0.2	
90th Percentile Output:												
fB%	2.0	1.6		2.0	1.5			1.8			1.7	
[illegible]OQ	0.4	11.1		0.4	23.1			3.7			9.2	
[illegible]atio	0.1	0.3		0.1	0.6			0.2			0.2	
95th Percentile Output:												
fB%	2.6	1.9		2.6	1.6			2.0			1.9	
BOQ	0.5	12.6		0.6	25.0			4.3			10.5	
QSRatio	0.1	0.3		0.1	0.6			0.3			0.3	
98th Percentile Output:												
fB%	3.1	2.1		3.1	1.8			2.6			2.4	
BOQ	0.6	14.2		0.7	26.8			5.3			12.8	
QSRatio	0.1	0.4		0.2	0.7			0.4			0.3	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: BUILD PM PEAK
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	30	848	8	20	576	9	17	89	50	62	60	21
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	69.2						19.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	405	571	0.10	0.71	5.0	A		
TR	1277	1798	0.88	0.71	20.3	C	19.8	B
Westbound								
L	119	167	0.19	0.71	8.5	A		
TR	1320	1859	0.52	0.71	8.1	A	8.1	A
Northbound								
LTR	407	1940	0.46	0.21	35.4	D	35.4	D
Southbound								
LTR	288	1371	0.54	0.21	37.2	D	37.2	D

Intersection Delay = 18.6 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: BUILD PM PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	30	848	8	20	576	9	17	89	50	62	60	21
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.76	0.76	0.76	0.86	0.86	0.86	0.83	0.83	0.83	0.92	0.92	0.92
PHF 15 Vol	10	279	3	6	167	3	5	27	15	17	16	6
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	39	1127		23	680			187			155	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.107			0.432	
Prop RTs		0.010			0.015			0.321			0.148	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
Unit Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
	Left	P				NB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
WB	Left	P				SB	Left	A			
	Thru	P					Thru	A			
	Right	P					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		69.2						19.7			
Yellow		3.8						3.3			
All Red		2.0						2.0			

Cycle Length: 100.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
ume, V	30	848	8	20	576	9	17	89	50	62	60	21
PHF	0.76	0.76	0.76	0.86	0.86	0.86	0.83	0.83	0.83	0.92	0.92	0.92
Adj flow	39	1116	11	23	670	10	20	107	60	67	65	23
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	39	1127		23	680			187			155	
Prop LTs	1.000	0.000		1.000	0.000			0.107			0.432	
Prop RTs		0.010			0.015			0.321			0.148	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.998			0.957			0.980	
fLT	0.329	1.000		0.099	1.000			0.961			0.683	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
b		1.000			1.000			1.000			1.000	
	571	1798		167	1859			1940			1371	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	39	571	0.07	0.71	405	0.10
Prot							
Perm							
Thru	TR	1127	1798	# 0.63	0.71	1277	0.88
Right							
Westbound							
Prot							
Perm							
Left	L	23	167	0.14	0.71	119	0.19
Prot							
Perm							
Thru	TR	680	1859	0.37	0.71	1320	0.52
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	187	1940	0.10	0.21	407	0.46
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	155	1371	# 0.11	0.21	288	0.54
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.74
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.80

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.10	0.71	4.5	1.000	405	0.50	0.5	0.0	5.0	A		
TR	0.88	0.71	11.3	1.000	1277	0.50	9.0	0.0	20.3	C	19.8	B
Westbound												
L	0.19	0.71	4.9	1.000	119	0.50	3.6	0.0	8.5	A		
TR	0.52	0.71	6.6	1.000	1320	0.50	1.4	0.0	8.1	A	8.1	A
Northbound												
[illegible]	0.46	0.21	34.5	1.000	407	0.11	0.8	0.0	35.4	D	35.4	D
Southbound												

LTR	0.54	0.21	35.2	1.000	288	0.14	2.0	0.0	37.2	D	37.2	D

Intersection delay = 18.6 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)		69.2	69.2		
Effective permitted green time for LT lane group, g(s)		71.0	71.0		
Opposing effective green time, go (s)		71.0	71.0		
Number of lanes in LT lane group, N		1	1		
Number of lanes in opposing approach, No		1	1		
Adjusted LT flow rate, VLT (veh/h)		39	23		
Proportion of LT in LT lane group, PLT		1.000	1.000		
Proportion of LT in opposing flow, PLTo		0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)		680	1127		
Lost time for LT lane group, tL		4.00	4.00		
Computation					
LT volume per cycle, LTC=VLTC/3600		1.08	0.64		
Opposing lane util. factor, fLUo		1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)		18.89	31.31		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g		0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)		1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]		0.29	0.29		
gq, (see Exhibit C16-4,5,6,7,8)		13.61	44.56		
gu=g-gq if gq>=gf, or = g-gf if gq<gf		57.39	26.44		
r Max(gq-gf)/2,0)		6.80	22.28		
o=1-PLTo		1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]		1.00	1.00		
EL1 (refer to Exhibit C16-3)		2.46	3.74		
EL2=Max((1-Ptho**n)/Plto, 1.0)					
fmin=2(1+PL)/g or fmin=2(1+Pl)/g		0.06	0.06		
gdiff=max(gq-gf,0)		0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)		0.33	0.10		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)					
or flt=[fm+0.91(N-1)]/N**					
Left-turn adjustment, fLT		0.329	0.099		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

		EB	WB	NB	SB
Cycle length, C	100.0 sec				
Total actual green time for LT lane group, G (s)				19.7	19.7
ective permitted green time for LT lane group, g(s)				21.0	21.0
posing effective green time, go (s)				21.0	21.0
Number of lanes in LT lane group, N				1	1
Number of lanes in opposing approach, No				1	1

Adjusted LT flow rate, VLT (veh/h)			20	67
Proportion of LT in LT lane group, PLT	0.000	0.000	0.107	0.432
Proportion of LT in opposing flow, PLTo			0.43	0.11
Adjusted opposing flow rate, Vo (veh/h)			155	187
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.56	1.86
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			4.31	5.19
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			6.9	1.5
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.79	0.79
gq, (see Exhibit C16-4,5,6,7,8)			7.71	9.51
gu=g-gq if gq>=gf, or = g-gf if gq<gf			13.29	11.49
n=Max(gq-gf)/2,0)			0.42	3.99
PTHo=1-PLTo			0.57	0.89
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.11	0.43
EL1 (refer to Exhibit C16-3)			1.62	1.68
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.00	3.40
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.11	0.14
gdiff=max(gq-gf,0)			0.83	7.98
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.96	0.68
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.961	0.683

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	100.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v					
v/c ratio from Capacity Worksheet, X					
Protected phase effective green interval, g (s)					
Opposing queue effective green interval, gq					
Unopposed green interval, gu					
Red time r=(C-g-gq-gu)					
Arrival rate, qa=v/(3600(max[X,1.0]))					
Protected ph. departure rate, Sp=s/3600					
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)					
XPerm					
XProt					
Case					
Queue at beginning of green arrow, Qa					
Queue at beginning of unsaturated green, Qu					
Residual queue, Qr					
Uniform Delay, d1					

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

r/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 18.6 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR			LTR			LTR	
Init Queue	0.0	0.0		0.0	0.0			0.0			0.0	
Flow Rate	39	1127		23	680			187			155	
So	1900	1900		1900	1900			1900			1900	
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
SL	571	1798		167	1859			1940			1371	
Capacity	405	1277		119	1320			407			288	
Flow Ratio	0.07	0.63		0.14	0.37			0.10			0.11	
v/c Ratio	0.10	0.88		0.19	0.52			0.46			0.54	
Grn Ratio	0.71	0.71		0.71	0.71			0.21			0.21	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.3	24.3		0.2	8.6			4.5			3.8	
kB	0.7	1.5		0.3	1.5			0.4			0.3	
Q2	0.1	7.8		0.1	1.6			0.4			0.4	
Q Average	0.4	32.1		0.3	10.2			4.9			4.2	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.1	0.8		0.1	0.3			0.3			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.5	38.5		0.4	12.4			5.8			5.0	
QSRatio	0.1	1.0		0.1	0.3			0.4			0.1	
85th Percentile Output:												
fB%	1.7	1.4		1.7	1.4			1.6			1.6	
BOQ	0.7	44.9		0.5	14.7			7.6			6.6	
QSRatio	0.1	1.1		0.1	0.4			0.5			0.2	
90th Percentile Output:												
fB%	2.0	1.5		2.0	1.6			1.7			1.7	
BOQ	0.8	48.1		0.6	16.0			8.4			7.3	
QSRatio	0.2	1.2		0.1	0.4			0.6			0.2	
95th Percentile Output:												
fB%	2.5	1.6		2.5	1.7			2.0			2.0	
BOQ	1.0	51.4		0.7	17.6			9.6			8.4	
QSRatio	0.2	1.3		0.2	0.4			0.6			0.2	
98th Percentile Output:												
fB%	3.1	1.7		3.1	1.9			2.4			2.4	
BOQ	1.3	54.6		0.9	19.3			11.7			10.2	
QSRatio	0.3	1.4		0.2	0.5			0.8			0.3	

ERROR MESSAGES

No errors to report.

HCS2000: Signalized Intersections Release 4.1d

Analyst: REB
Agency: RMS ENGINEERING
Date: 6/30/2003
Period: BUILD SAT PEAK
ject ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
E/W St: PULASKI ROAD (CR 11)

Inter.: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisd: TOWN OF HUNTINGTON
Year : 2005
N/S St: STONY HOLLOW ROAD

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Volume	23	613	3	21	685	46	17	50	38	56	61	24
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
WB Left	P				SB	Left	A			
Thru	P					Thru	A			
Right	P					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	44.2						14.7			
Yellow	3.8						3.3			
All Red	2.0						2.0			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	298	454	0.08	0.66	4.9	A		
TR	1182	1799	0.54	0.66	8.1	A	8.0	A
Westbound								
L	375	570	0.06	0.66	4.6	A		
TR	1212	1845	0.63	0.66	9.6	A	9.5	A
Northbound								
LTR	430	1881	0.33	0.23	23.0	C	23.0	C
Southbound								
LTR	382	1672	0.45	0.23	24.0	C	24.0	C

Intersection Delay = 11.4 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

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OPERATIONAL ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 6/30/2003
Analysis Time Period: BUILD SAT PEAK
Intersection: CR 11 @ STONY HOLLOW ROAD
Area Type: All other areas
Jurisdiction: TOWN OF HUNTINGTON
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080

East/West Street: PULASKI ROAD (CR 11)
North/South Street: STONY HOLLOW ROAD

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	613	3	21	685	46	17	50	38	56	61	24
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.75	0.75	0.75	0.82	0.82	0.82
PHF 15 Vol	6	158	1	6	180	12	6	17	13	17	19	7
Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
LGConfig	L	TR		L	TR			LTR			LTR	
Lane Width	10.0	11.0		9.0	12.0			16.0			15.0	
RTOR Vol			0			0			0			0
Adj Flow	24	635		22	769			141			171	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000			0.163			0.398	
Prop RTs		0.005			0.062			0.362			0.170	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0			0			0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0			0.0			0.0	
Arriv. Type	3	3		3	3			3			3	
t Ext.	3.0	3.0		3.0	3.0			3.0			3.0	
Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext of g	3.8	3.8		3.8	3.8			3.3			3.3	

Ped Min g	3.2	3.2	3.2	3.2

PHASE DATA

Phase Combination	1	2	3	4	5	6	7	8
Left	P				NB Left	A		
Thru	P				Thru	A		
Right	P				Right	A		
Peds					Peds			
WB Left	P				SB Left	A		
Thru	P				Thru	A		
Right	P				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	44.2				14.7			
Yellow	3.8				3.3			
All Red	2.0				2.0			

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	23	613	3	21	685	46	17	50	38	56	61	24
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.75	0.75	0.75	0.82	0.82	0.82
Adj flow	24	632	3	22	721	48	23	67	51	68	74	29
No. Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Adj flow	24	635		22	769			141			171	
Prop LTs	1.000	0.000		1.000	0.000			0.163			0.398	
Prop RTs		0.005			0.062			0.362			0.170	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	TR		L	TR			LTR			LTR	
So	1900	1900		1900	1900			1900			1900	
Lanes	1	1	0	1	1	0	0	1	0	0	1	0
fW	0.933	0.967		0.900	1.000			1.133			1.100	
fHV	0.980	0.980		0.980	0.980			0.980			0.980	
fG	1.000	1.000		1.000	1.000			1.000			1.000	
fP	1.000	1.000		1.000	1.000			1.000			1.000	
fBB	1.000	1.000		1.000	1.000			1.000			1.000	
fA	1.00	1.00		1.00	1.00			1.00			1.00	
fLU	1.00	1.00		1.00	1.00			1.00			1.00	
fRT		0.999			0.991			0.951			0.977	
fLT	0.261	1.000		0.340	1.000			0.937			0.835	
Sec.												
fLpb	1.000	1.000		1.000	1.000			1.000			1.000	
[illegible]		1.000			1.000			1.000			1.000	
S[illegible]	454	1799		570	1845			1881			1672	
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							
Perm							
Left	L	24	454	0.05	0.66	298	0.08
Prot							
Perm							
Thru	TR	635	1799	0.35	0.66	1182	0.54
Right							
Westbound							
Prot							
Perm							
Left	L	22	570	0.04	0.66	375	0.06
Prot							
Perm							
Thru	TR	769	1845	# 0.42	0.66	1212	0.63
Right							
Northbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	141	1881	0.07	0.23	430	0.33
Right							
Southbound							
Prot							
Perm							
Left							
Prot							
Perm							
Thru	LTR	171	1672	# 0.10	0.23	382	0.45
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.52
Total lost time per cycle, L = 8.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.59

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.08	0.66	4.3	1.000	298	0.50	0.5	0.0	4.9	A		
TR	0.54	0.66	6.4	1.000	1182	0.50	1.8	0.0	8.1	A	8.0	A
Westbound												
L	0.06	0.66	4.3	1.000	375	0.50	0.3	0.0	4.6	A		
TR	0.63	0.66	7.1	1.000	1212	0.50	2.5	0.0	9.6	A	9.5	A
Northbound												
[illegible]	0.33	0.23	22.5	1.000	430	0.11	0.4	0.0	23.0	C	23.0	C
Southbound												

LTR	0.45	0.23	23.2	1.000	382	0.11	0.8	0.0	24.0	C	24.0	C

Intersection delay = 11.4 (sec/veh) Intersection LOS = B

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	44.2	44.2		
Effective permitted green time for LT lane group, g(s)	46.0	46.0		
Opposing effective green time, go (s)	46.0	46.0		
Number of lanes in LT lane group, N	1	1		
Number of lanes in opposing approach, No	1	1		
Adjusted LT flow rate, VLT (veh/h)	24	22		
Proportion of LT in LT lane group, PLT	1.000	1.000		
Proportion of LT in opposing flow, PLTo	0.00	0.00		
Adjusted opposing flow rate, Vo (veh/h)	769	635		
Lost time for LT lane group, tL	4.00	4.00		
Computation				
LT volume per cycle, LTC=VLTC/3600	0.47	0.43		
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	14.95	12.35		
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0		
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00		
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.34	0.34		
gq, (see Exhibit C16-4,5,6,7,8)	13.90	9.08		
gu=g-gq if gq>=gf, or = g-gf if gq<gf	32.10	36.92		
ax(gq-gf)/2,0)	6.95	4.54		
o=1-PLTo	1.00	1.00		
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00		
EL1 (refer to Exhibit C16-3)	2.67	2.36		
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.09	0.09		
gdiff=max(gq-gf,0)	0.00	0.00		
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.26	0.34		
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.261	0.340		

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)			14.7	14.7
ective permitted green time for LT lane group, g(s)			16.0	16.0
Opposing effective green time, go (s)			16.0	16.0
Number of lanes in LT lane group, N			1	1
Number of lanes in opposing approach, No			1	1

Adjusted LT flow rate, VLT (veh/h)			23	68
Proportion of LT in LT lane group, PLT	0.000	0.000	0.163	0.398
Proportion of LT in opposing flow, PLTo			0.40	0.16
Adjusted opposing flow rate, Vo (veh/h)			171	141
Lost time for LT lane group, tL			4.00	4.00
Computation				
volume per cycle, LTC=VLTC/3600			0.45	1.32
Opposing lane util. factor, fLUo	1.00	1.00	1.00	1.00
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)			3.33	2.74
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g			4.8	1.3
Opposing platoon ratio, Rpo (refer Exhibit 16-11)			1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]			0.77	0.77
gq, (see Exhibit C16-4,5,6,7,8)			5.38	4.09
gu=g-gq if gq>=gf, or = g-gf if gq<gf			10.62	11.91
n=Max(gq-gf)/2,0)			0.31	1.41
PTHo=1-PLTo			0.60	0.84
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]			0.16	0.40
EL1 (refer to Exhibit C16-3)			1.65	1.60
EL2=Max((1-Ptho**n)/Plto, 1.0)			1.00	1.36
fmin=2(1+PL)/g or fmin=2(1+Pl)/g			0.15	0.17
gdiff=max(gq-gf,0)			0.62	2.82
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)			0.94	0.84
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT			0.937	0.835

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm. special case of multilane approach opposed by single-lane approach when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
pedg				
Effective green, g (s)				
Vbicg				
OCCbicg				

OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
ht turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

			EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0	sec				
Adj. LT vol from Vol Adjustment Worksheet, v						
v/c ratio from Capacity Worksheet, X						
Protected phase effective green interval, g (s)						
Opposing queue effective green interval, gq						
Unopposed green interval, gu						
Red time r=(C-g-gq-gu)						
Arrival rate, qa=v/(3600(max[X,1.0]))						
Protected ph. departure rate, Sp=s/3600						
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)						
XPerm						
XProt						
Case						
Queue at beginning of green arrow, Qa						
Queue at beginning of unsaturated green, Qu						
Residual queue, Qr						
Uniform Delay, d1						

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

pr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
Westbound								
Northbound								
Southbound								

Intersection Delay 11.4 sec/veh Intersection LOS B

BACK OF QUEUE WORKSHEET

	Eastbound	Westbound	Northbound	Southbound

LaneGroup	L	TR		L	TR			LTR			LTR	
Init Queue	0.0	0.0		0.0	0.0			0.0			0.0	
Flow Rate	24	635		22	769			141			171	
So	1900	1900		1900	1900			1900			1900	
No.Lanes	1	1	0	1	1	0	0	1	0	0	1	0
ST	454	1799		570	1845			1881			1672	
Capacity	298	1182		375	1212			430			382	
Flow Ratio	0.05	0.35		0.04	0.42			0.07			0.10	
v/c Ratio	0.08	0.54		0.06	0.63			0.33			0.45	
Grn Ratio	0.66	0.66		0.66	0.66			0.23			0.23	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3			3			3	
Pltn Ratio	1.00	1.00		1.00	1.00			1.00			1.00	
PF2	1.00	1.00		1.00	1.00			1.00			1.00	
Q1	0.2	6.5		0.2	8.8			2.3			2.9	
kB	0.4	1.1		0.5	1.1			0.4			0.3	
Q2	0.0	1.2		0.0	1.8			0.2			0.3	
Q Average	0.2	7.8		0.2	10.6			2.5			3.1	
Q Spacing	25.0	25.0		25.0	25.0			25.0			25.0	
Q Storage	125	1000		100	1000			375			1000	
Q S Ratio	0.0	0.2		0.0	0.3			0.2			0.1	
70th Percentile Output:												
fB%	1.3	1.2		1.3	1.2			1.2			1.2	
BOQ	0.3	9.5		0.2	12.9			2.9			3.7	
QSRatio	0.1	0.2		0.1	0.3			0.2			0.1	
85th Percentile Output:												
fB%	1.7	1.5		1.7	1.4			1.6			1.6	
BOQ	0.3	11.4		0.3	15.3			3.9			4.9	
QSRatio	0.1	0.3		0.1	0.4			0.3			0.1	
90th Percentile Output:												
fB%	2.0	1.6		2.0	1.6			1.8			1.7	
BOQ	0.4	12.5		0.4	16.6			4.3			5.4	
QSRatio	0.1	0.3		0.1	0.4			0.3			0.1	
95th Percentile Output:												
fB%	2.6	1.8		2.6	1.7			2.0			2.0	
BOQ	0.5	14.1		0.5	18.3			5.0			6.3	
QSRatio	0.1	0.4		0.1	0.5			0.3			0.2	
98th Percentile Output:												
fB%	3.1	2.0		3.1	1.9			2.5			2.5	
BOQ	0.6	15.7		0.6	20.0			6.2			7.8	
QSRatio	0.1	0.4		0.1	0.5			0.4			0.2	

ERROR MESSAGES

No errors to report.

II. Unsignalized Intersections

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 7/16/2003
Analysis Time Period: BUILD AM PEAK
Intersection: CR 11 @ SITE ACCESS
Jurisdiction: TOWN OF HUNTINGTON
Units: U. S. Customary
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West Street: PULASKI ROAD (CR 11)
North/South Street: SITE ACCESS DRIVEWAY
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	8	528			763	7
Peak-Hour Factor, PHF	0.94	0.94			0.93	0.93
Hourly Flow Rate, HFR	8	561			820	7
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	TWLTL			/ 4		
RT Channelized?						No
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				36		33
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				40		36
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1	1	
Configuration				L	R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	8					40		36
C(m) (vph)	725					381		382
v/c	0.01					0.10		0.09
95% queue length	0.03					0.35		0.31
Control Delay	10.0+					15.6		15.4
LOS	B					C		C
Approach Delay							15.5	
Approach LOS							C	

HCS2000: Unsignalized Intersections Release 4.1d

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TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 7/16/2003
Analysis Time Period: BUILD AM PEAK
Intersection: CR 11 @ SITE ACCESS
Jurisdiction: TOWN OF HUNTINGTON
Units: U. S. Customary
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West Street: PULASKI ROAD (CR 11)
North/South Street: SITE ACCESS DRIVEWAY
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	8	528			763	7
Peak-Hour Factor, PHF	0.94	0.94			0.93	0.93
Peak-15 Minute Volume	2	140			205	2
Hourly Flow Rate, HFR	8	561			820	7
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	TWLTL			/ 4		
RT Channelized?						No
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				36		33
Peak Hour Factor, PHF				0.90		0.90
Peak-15 Minute Volume				10		9
Hourly Flow Rate, HFR				40		36
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
RT Channelized?						No
Lanes				1	1	
Configuration				L	R	

Pedestrian Volumes and Adjustments

Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0

Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data

		Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2	Left-Turn							
	Through							
S5	Left-Turn	0	1700	3	0	90	40	611
	Through	549	1700	3	38	90	40	611

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

Movement		1	4	7	8	9	10	11	12
		L	L	L	T	R	L	T	R
t(c,base)		4.1					7.1		6.2
t(c,hv)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(hv)		2					2		2
t(c,g)				0.20	0.20	0.10	0.20	0.20	0.10
Grade/100				0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)		0.00					0.70		0.00
t(c,T):	1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c)	1-stage	4.1					6.4		6.2
	2-stage	4.1					5.4		6.2

Follow-Up Time Calculations

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
t(f,base)	2.20					3.50		3.30
t(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P(HV)	2					2		2
t(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
V prog			549	0
Total Saturation Flow Rate, s (vph)			1700	1700
Arrival Type			3	3
Effective Green, g (sec)			38	0
Cycle Length, C (sec)			90	90
Rp (from Exhibit 16-11)			1.000	1.000
Proportion vehicles arriving on green P			0.422	0.000
g(q1)			16.8	0.0
g(q2)			8.0	0.0
g(q)			24.8	0.0

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
alpha				0.400
beta				0.714
Travel time, t(a) (sec)				10.391
Smoothing Factor, F				0.252
Proportion of conflicting flow, f			1.000	1.000
Max platooned flow, V(c,max)			1699	0
Min platooned flow, V(c,min)			1000	1000
Duration of blocked period, t(p)			25.0	0.0
Proportion time blocked, p		0.000		0.277

Computation 3-Platoon Event Periods	Result
p(2)	0.000
p(5)	0.277
p(dom)	0.277
p(subo)	0.000
Constrained or unconstrained?	U

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Two-Stage Process Stage II
p(1)	0.723		
p(4)			
p(7)			
p(8)			
p(9)			
p(10)	0.723	0.723	1.000
p(11)			
p(12)	0.723		

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
V c,x	827					1397		820
s	1500					1500		1500
Px	0.723					0.723		0.723
V c,u,x	569					1357		559
C r,x	1003					164		529
C plat,x	725					118		382

Two-Stage Process

7	8	10	11

	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(c,x)			820	577				
s			1500	1500				
P(x)			0.723	1.000				
V(c,u,x)			559	577				
C(r,x)			572	562				
C(plat,x)			413	562				

Worksheet 6-Impedance and Capacity Equations

: RT from Minor St.	9	12
Conflicting Flows		820
Potential Capacity		382
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		382
Probability of Queue free St.	1.00	0.91
Step 2: LT from Major St.	4	1
Conflicting Flows		827
Potential Capacity		725
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		725
Probability of Queue free St.	1.00	0.99
Maj L-Shared Prob Q free St.		
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.99	0.99
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		1397
Potential Capacity		118
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.99	
Maj. L, Min T Adj. Imp Factor.	0.99	
Cap. Adj. factor due to Impeding mvmnt	0.90	0.99
Movement Capacity		117

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity	505	371
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.99	1.00
Movement Capacity	499	371
Probability of Queue free St.	1.00	1.00
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity	368	505
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	1.00	0.99
Movement Capacity	368	499
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.99	0.99
Movement Capacity		
Result for 2 stage process:		
a	0.98	0.98
y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		820
Potential Capacity	566	413
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.99	1.00
Movement Capacity	560	413
Part 2 - Second Stage		
Conflicting Flows		577
Potential Capacity	403	562
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.91	0.99
Movement Capacity	365	556
Part 3 - Single Stage		
Conflicting Flows		1397
Potential Capacity		118
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.99	
Maj. L, Min T Adj. Imp Factor.	0.99	
Cap. Adj. factor due to Impeding mvmnt	0.90	0.99
Movement Capacity		117
Results for Two-stage process:		
a	0.98	0.98
y		0.67
C t		381

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				40		36
Movement Capacity (vph)				381		382
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
C sep				381		382
Volume				40		36
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	8					40		36
C(m) (vph)	725					381		382
v/c	0.01					0.10		0.09
95% queue length	0.03					0.35		0.31
Control Delay	10.0+					15.6		15.4
LOS	B					C		C
Approach Delay							15.5	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.99	1.00
v(i1), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(i1), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
P*(oj)		
d(M,LT), Delay for stream 1 or 4	10.0+	
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 7/16/2003
Analysis Time Period: BUILD PM PEAK
Intersection: CR 11 @ SITE ACCESS
Jurisdiction: TOWN OF HUNTINGTON
Units: U. S. Customary
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West Street: PULASKI ROAD (CR 11)
North/South Street: SITE ACCESS DRIVEWAY
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	37	921			585	35
Peak-Hour Factor, PHF	0.97	0.97			0.94	0.94
Hourly Flow Rate, HFR	38	949			622	37
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	TWLTL			/ 4		
RT Channelized?						No
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				19		18
Peak Hour Factor, PHF				0.92		0.92
Hourly Flow Rate, HFR				20		19
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1	1	
Configuration				L	R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	38					20		19
C(m) (vph)	890					313		516
v/c	0.04					0.06		0.04
95% queue length	0.13					0.20		0.11
Control Delay	9.2					17.3		12.2
LOS	A					C		B
Approach Delay							14.8	
Approach LOS							B	

HCS2000: Unsignalized Intersections Release 4.1d

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TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 7/16/2003
Analysis Time Period: BUILD PM PEAK
Intersection: CR 11 @ SITE ACCESS
Jurisdiction: TOWN OF HUNTINGTON
Units: U. S. Customary
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West Street: PULASKI ROAD (CR 11)
North/South Street: SITE ACCESS DRIVEWAY
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	37	921			585	35
Peak-Hour Factor, PHF	0.97	0.97			0.94	0.94
Peak-15 Minute Volume	10	237			156	9
Hourly Flow Rate, HFR	38	949			622	37
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	TWLTL			/ 4		
RT Channelized?						No
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				19		18
Peak Hour Factor, PHF				0.92		0.92
Peak-15 Minute Volume				5		5
Hourly Flow Rate, HFR				20		19
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
RT Channelized?						No
Lanes				1	1	
Configuration				L	R	

Pedestrian Volumes and Adjustments

Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0

Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data

		Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2	Left-Turn							
	Through							
S5	Left-Turn	0	1700	3	0	100	40	611
	Through	417	1700	3	40	100	40	611

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

Movement		1	4	7	8	9	10	11	12
		L	L	L	T	R	L	T	R
t(c,base)		4.1					7.1		6.2
t(c,hv)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(hv)		2					2		2
t(c,g)				0.20	0.20	0.10	0.20	0.20	0.10
Grade/100				0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)		0.00					0.70		0.00
t(c,T):	1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c)	1-stage	4.1					6.4		6.2
	2-stage	4.1					5.4		6.2

Follow-Up Time Calculations

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
t(f,base)	2.20					3.50		3.30
t(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P(HV)	2					2		2
t(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2 V(t)	Movement 2 V(1,prot)	Movement 5 V(t)	Movement 5 V(1,prot)
V prog			417	0
Total Saturation Flow Rate, s (vph)			1700	1700
Arrival Type			3	3
Effective Green, g (sec)			40	0
Cycle Length, C (sec)			100	100
Rp (from Exhibit 16-11)			1.000	1.000
Proportion vehicles arriving on green P			0.400	0.000
g(q1)			14.7	0.0
g(q2)			4.8	0.0
g(q)			19.5	0.0

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2 V(t)	Movement 2 V(1,prot)	Movement 5 V(t)	Movement 5 V(1,prot)
alpha			0.400	
beta			0.714	
Travel time, t(a) (sec)			10.391	
Smoothing Factor, F			0.252	
Proportion of conflicting flow, f			1.000	1.000
Max platooned flow, V(c,max)			1694	0
Min platooned flow, V(c,min)			1000	1000
Duration of blocked period, t(p)			19.1	0.0
Proportion time blocked, p	0.000		0.191	

Computation 3-Platoon Event Periods	Result
p(2)	0.000
p(5)	0.191
p(dom)	0.191
p(subo)	0.000
Constrained or unconstrained?	U

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Two-Stage Process Stage II
p(1)	0.809		
p(4)			
p(7)			
p(8)			
p(9)			
p(10)	0.809	0.809	1.000
p(11)			
p(12)	0.809		

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
V c,x	659					1647		622
s	1500					1500		1500
Px	0.809					0.809		0.809
V c,u,x	460					1682		414
C r,x	1101					104		638
C plat,x	890					84		516

Two-Stage Process

7	8	10	11

	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(c,x)					622	1025		
s					1500	1500		
P(x)					0.809	1.000		
V(c,u,x)					414	1025		
C(r,x)					667	346		
C(plat,x)					539	346		

W heet 6-Impedance and Capacity Equations

RT from Minor St.	9	12
Conflicting Flows		622
Potential Capacity		516
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		516
Probability of Queue free St.	1.00	0.96
Step 2: LT from Major St.	4	1
Conflicting Flows		659
Potential Capacity		890
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		890
Probability of Queue free St.	1.00	0.96
Maj L-Shared Prob Q free St.		
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	0.96
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		1647
Potential Capacity		84
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.96	
Maj. L, Min T Adj. Imp Factor.	0.97	
Cap. Adj. factor due to Impeding mvmnt	0.93	0.96
Movement Capacity		80

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity	315	483
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	1.00
Movement Capacity	302	483
Probability of Queue free St.	1.00	1.00
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity	460	315
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	1.00	0.96
Movement Capacity	460	302
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	0.96
Movement Capacity		
Result for 2 stage process:		
a	0.98	0.98
y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		622
Potential Capacity	349	539
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	1.00
Movement Capacity	334	539
Part 2 - Second Stage		
Conflicting Flows		1025
Potential Capacity	523	346
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	0.96
Movement Capacity	504	331
Part 3 - Single Stage		
Conflicting Flows		1647
Potential Capacity		84
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.96	
Maj. L, Min T Adj. Imp Factor.	0.97	
Cap. Adj. factor due to Impeding mvmnt	0.93	0.96
Movement Capacity		80
Results for Two-stage process:		
a	0.98	0.98
y		1.83
C t		313

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				20		19
Movement Capacity (vph)				313		516
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
C sep				313		516
Volume				20		19
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	38					20		19
C(m) (vph)	890					313		516
v/c	0.04					0.06		0.04
95% queue length	0.13					0.20		0.11
Control Delay	9.2					17.3		12.2
LOS	A					C		B
Approach Delay							14.8	
Approach LOS							B	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.96	1.00
v(i1), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(i1), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
p*(oj)		
d(M,LT), Delay for stream 1 or 4	9.2	
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 7/16/2003
Analysis Time Period: BUILD SAT PEAK
Intersection: CR 11 @ SITE ACCESS
Jurisdiction: TOWN OF HUNTINGTON
Units: U. S. Customary
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West Street: PULASKI ROAD (CR 11)
North/South Street: SITE ACCESS DRIVEWAY
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	673			720	29
Peak-Hour Factor, PHF	0.97	0.97			0.94	0.94
Hourly Flow Rate, HFR	31	693			765	30
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	TWLTL			/ 4		
RT Channelized?					No	
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				29		27
Peak Hour Factor, PHF				0.92		0.92
Hourly Flow Rate, HFR				31		29
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1	1	
Configuration				L	R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	31					31		29
C(m) (vph)	770					368		410
v/c	0.04					0.08		0.07
95% queue length	0.13					0.27		0.23
Control Delay	9.9					15.7		14.4
LOS	A					C		B
Approach Delay							15.1	
Approach LOS							C	

HCS2000: Unsignalized Intersections Release 4.1d

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TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: REB
Agency/Co.: RMS ENGINEERING
Date Performed: 7/16/2003
Analysis Time Period: BUILD SAT PEAK
Intersection: CR 11 @ SITE ACCESS
Jurisdiction: TOWN OF HUNTINGTON
Units: U. S. Customary
Analysis Year: 2005
Project ID: HOUSING HELP @ MATINECOCK COURT, 2003-080
East/West Street: PULASKI ROAD (CR 11)
North/South Street: SITE ACCESS DRIVEWAY
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	673			720	29
Peak-Hour Factor, PHF	0.97	0.97			0.94	0.94
Peak-15 Minute Volume	8	173			191	8
Hourly Flow Rate, HFR	31	693			765	30
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	TWLTL			/ 4		
RT Channelized?					No	
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				29		27
Peak Hour Factor, PHF				0.92		0.92
Peak-15 Minute Volume				8		7
Hourly Flow Rate, HFR				31		29
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
RT Channelized?					No	
Lanes				1	1	
Configuration				L	R	

Pedestrian Volumes and Adjustments

Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0

Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data

		Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2	Left-Turn							
	Through							
S5	Left-Turn	0	1700	3	0	70	40	611
	Through	390	1700	3	22	70	40	611

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

Movement		1	4	7	8	9	10	11	12
		L	L	L	T	R	L	T	R
t(c,base)		4.1					7.1		6.2
t(c,hv)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(hv)		2					2		2
t(c,g)				0.20	0.20	0.10	0.20	0.20	0.10
Grade/100				0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)		0.00					0.70		0.00
t(c,T):	1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c)	1-stage	4.1					6.4		6.2
	2-stage	4.1					5.4		6.2

Follow-Up Time Calculations

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
t(f,base)	2.20					3.50		3.30
t(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P(HV)	2					2		2
t(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)
V prog			390	0
Total Saturation Flow Rate, s (vph)			1700	1700
Arrival Type			3	3
Effective Green, g (sec)			22	0
Cycle Length, C (sec)			70	70
Rp (from Exhibit 16-11)			1.000	1.000
Proportion vehicles arriving on green P			0.314	0.000
g(q1)			11.0	0.0
g(q2)			3.3	0.0
g(q)			14.3	0.0

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)
alpha			0.400	
beta			0.714	
Travel time, t(a) (sec)			10.391	
Smoothing Factor, F			0.252	
Proportion of conflicting flow, f			1.000	1.000
Max platooned flow, V(c,max)			1673	0
Min platooned flow, V(c,min)			1000	1000
Duration of blocked period, t(p)			13.8	0.0
Proportion time blocked, p	0.000		0.197	

Computation 3-Platoon Event Periods	Result
p(2)	0.000
p(5)	0.197
p(dom)	0.197
p(subo)	0.000
Constrained or unconstrained?	U

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Two-Stage Process Stage II
p(1)	0.803		
p(4)			
p(7)			
p(8)			
p(9)			
p(10)	0.803	0.803	1.000
p(11)			
p(12)	0.803		

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
V c,x	795					1520		765
s	1500					1500		1500
Px	0.803					0.803		0.803
V c,u,x	622					1525		585
C r,x	959					130		511
C plat,x	770					104		410

Two-Stage Process

7	8	10	11

	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(c,x)			765	755				
s			1500	1500				
P(x)			0.803	1.000				
V(c,u,x)			585	755				
C(r,x)			557	464				
C(plat,x)			447	464				

W[illegible]heet 6-Impedance and Capacity Equations

RT from Minor St.	9	12
Conflicting Flows		765
Potential Capacity		410
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		410
Probability of Queue free St.	1.00	0.93
Step 2: LT from Major St.	**4**	**1**
Conflicting Flows		795
Potential Capacity		770
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		770
Probability of Queue free St.	1.00	0.96
Maj L-Shared Prob Q free St.		
Step 3: TH from Minor St.	**8**	**11**
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	0.96
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	**7**	**10**
Conflicting Flows		1520
Potential Capacity		104
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.96	
Maj. L, Min T Adj. Imp Factor.	0.97	
Cap. Adj. factor due to Impeding mvmnt	0.90	0.96
Movement Capacity		100

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity	420	402
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	1.00
Movement Capacity	403	402
Probability of Queue free St.	1.00	1.00
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity	387	420
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	1.00	0.96
Movement Capacity	387	403
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	0.96
Movement Capacity		
Result for 2 stage process:		
a	0.98	0.98
y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	**7**	**10**
Part 1 - First Stage		
Conflicting Flows		765
Potential Capacity	468	447
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.96	1.00
Movement Capacity	449	447
Part 2 - Second Stage		
Conflicting Flows		755
Potential Capacity	434	464
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.93	0.96
Movement Capacity	403	445
Part 3 - Single Stage		
Conflicting Flows		1520
Potential Capacity		104
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.96	
Maj. L, Min T Adj. Imp Factor.	0.97	
Cap. Adj. factor due to Impeding mvmnt	0.90	0.96
Movement Capacity		100
Results for Two-stage process:		
a	0.98	0.98
y		1.01
C t		368

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				31		29
Movement Capacity (vph)				368		410
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
C sep				368		410
Volume				31		29
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	31					31		29
C(m) (vph)	770					368		410
v/c	0.04					0.08		0.07
95% queue length	0.13					0.27		0.23
Control Delay	9.9					15.7		14.4
LOS	A					C		B
Approach Delay							15.1	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.96	1.00
v(i1), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(i1), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
P*(oj)		
d(M,LT), Delay for stream 1 or 4	9.9	
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

APPENDIX G

List All Railways within 3000 feet of the site:

1. LIRR Port Jefferson Branch
2. Northport Spur (abandoned)
3.

Necessary Information:	NAL1 ~~Railway No. 1~~	NAL2 ~~Railway No. 2~~	~~Railway No. 3~~
1. Distance in feet from the NAL to the railway track:	165	320	
2. Number of trains in 24 hours:			
a. diesel	39.4	39.4	
b. electrified	----	----	
3. Fraction of operations occuring at night (10 p.m. – 7 a.m.):	0.33	0.33	
4. Number of diesel locomotives per train:	2	2	
5. Number of rail cars per train:			
a. diesel trains	6	6	
b. electrified trains	–	–	
6. Average train speed:	45mph	45mph	
7. Is track welded or bolted?	Welded	Welded	
8. Are whistles or horns required for grade crossings?	Yes	Yes	

Adjustments for Diesel Locomotives

	9 No. of Locomotives 2		10 Average Speed Table 9		11 Horns (enter 10)		12 Night-time Table 5		13 No. of Trains (line 2a)		14 Adj. No. of Opns.		15 DNL Workchart 3		16 Barrier Attn.		17 Partial DNL
NAL_1 ~~Railway No. 1~~	1	x	0.60	x	1	x	1.77	x	39.4	=	41.8		67	-		=	
NAL_2 ~~Railway No. 2~~	1	x	0.60	x	10	x	1.77	x	39.4	=	418		73	-		=	
Railway No. 3		x		x		x		x		=				-		=	

Adjustments for Railway Cars or Rapid Transit Trains

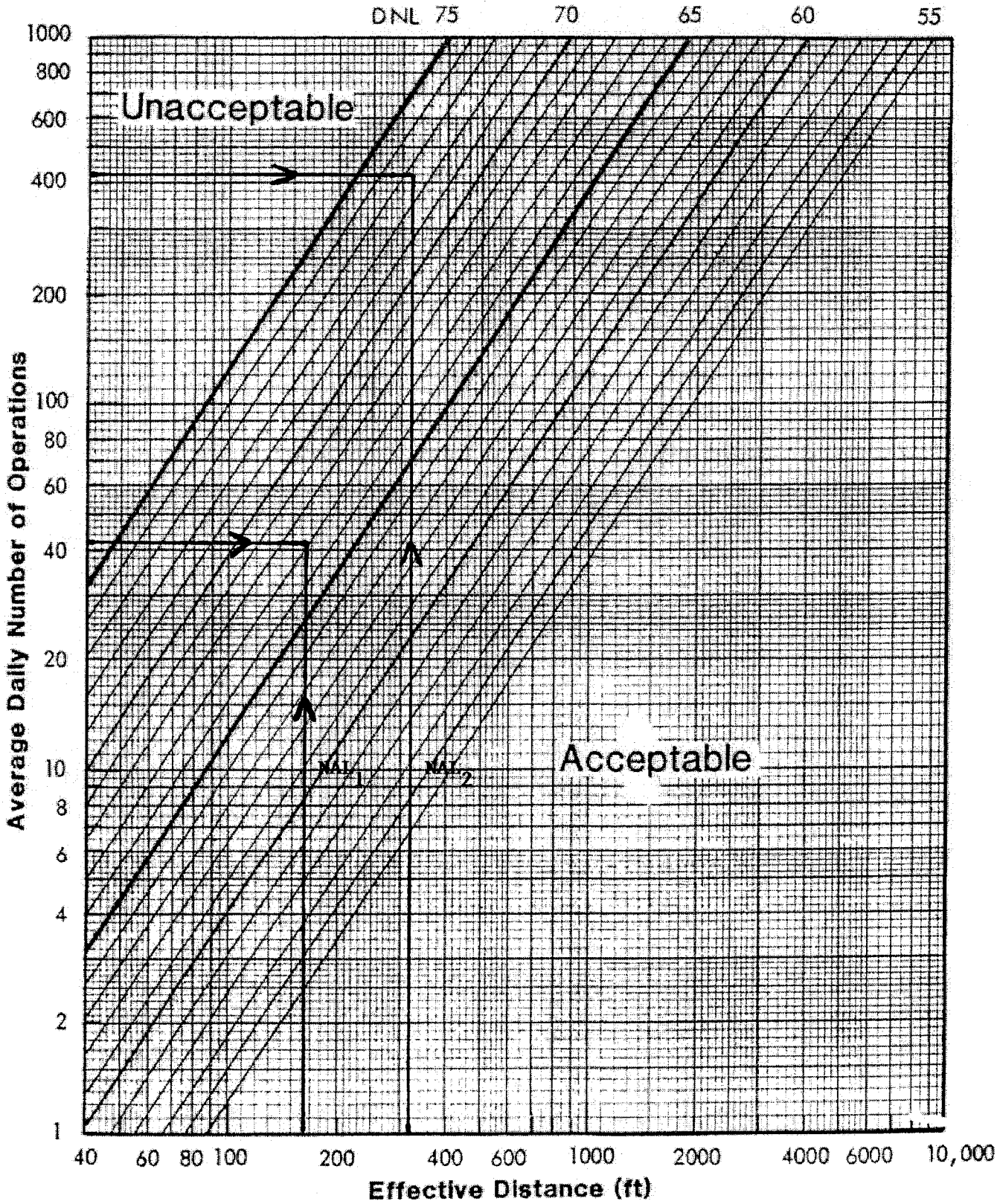
	18 Number of cars 50		19 Average Speed Table 10		20 Bolted Rails (enter 4)		21 Night-time Table 5		22 No. of Trains (Line 2a or 2b)		23 Adj. No. of Opns.		24 DNL Work-chart 4		25 Barrier Attn.		26 Partial DNL
NAL_1 ~~Railway No. 1~~	0.12	x	2.78	x	1	x	1.77	x	39.4	=	23.3		53	-		=	
NAL_2 ~~Railway No. 2~~	0.12	x	2.78	x	1	x	1.77	x	39.4	=	23.3		49	-		=	
Railway No. 3		x		x		x		x		=				-		=	

Combined Locomotive and Railway Car DNL

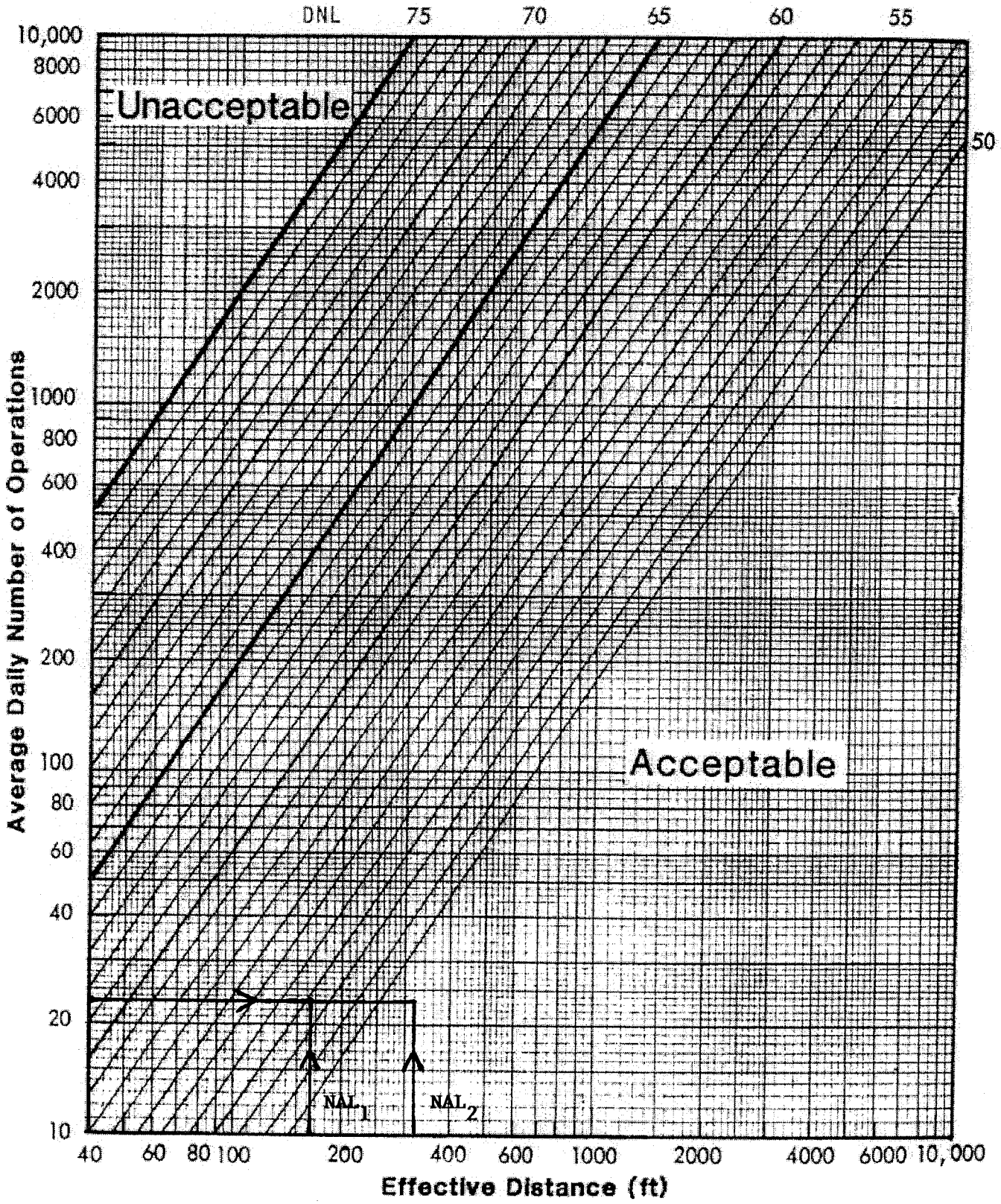
NAL_1 ~~Railway No. 1~~ 67.17 NAL_2 ~~Railway No. 2~~ 73.02 Railway No. 3 _____ Total DNL for all Railways _____

Signature _____ Date _____

Workchart 3
Railroads - Diesel Locomotives



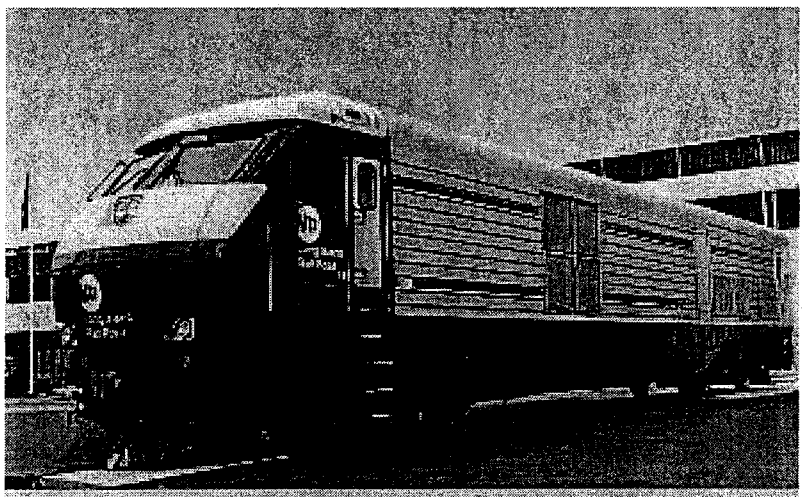
Workchart 4
Railroads - Cars and Rapid Transit



SIEMENS

Diesel-Electric Passenger Locomotives DE30AC and DM30AC with Three-Phase Propulsion Technology

Technical Information



Axle arrangement	Bo'Bo'
Track gauge	1435 mm
Weight	128 metric tons
Length	22,900 mm
Wheel diameter	1118 mm
Gear ratio	4.84 : 1
Maximum speed	160 kph in diesel operation 130 kph in electric operation
Fuel storage capacity	12,000 liters (9000 liters)
Starting tractive effort	360 kN
Diesel engine Type Output	 EMD 12-710 G3B 3000 hp / 2239 kW at 904 rpm
Continuous tractive power and supply voltage in third-rail operation (DM30AC)	2150 kW at 650 V DC
Trainline	480 V three-phase AC, 60 Hz 600 kW

The class DE30AC and DM30AC locomotives are the most modern diesel-powered passenger locomotives on the American continent. They offer high speed, great running comfort, low maintenance costs, low fuel consumption and a low noise level.

This was made possible by the use of modern and dependable three-phase AC propulsion technology:

- GTO pulse-width modulated inverters with evaporation bath cooling, proven reliable in thousands of units
- Low-maintenance three-phase asynchronous traction motors with nose and axle-suspended drive
- Static inverter for feeding the Head-end power trainline (HEP)
- Infinitely service-proven SIBAS® 32 microcomputer traction control

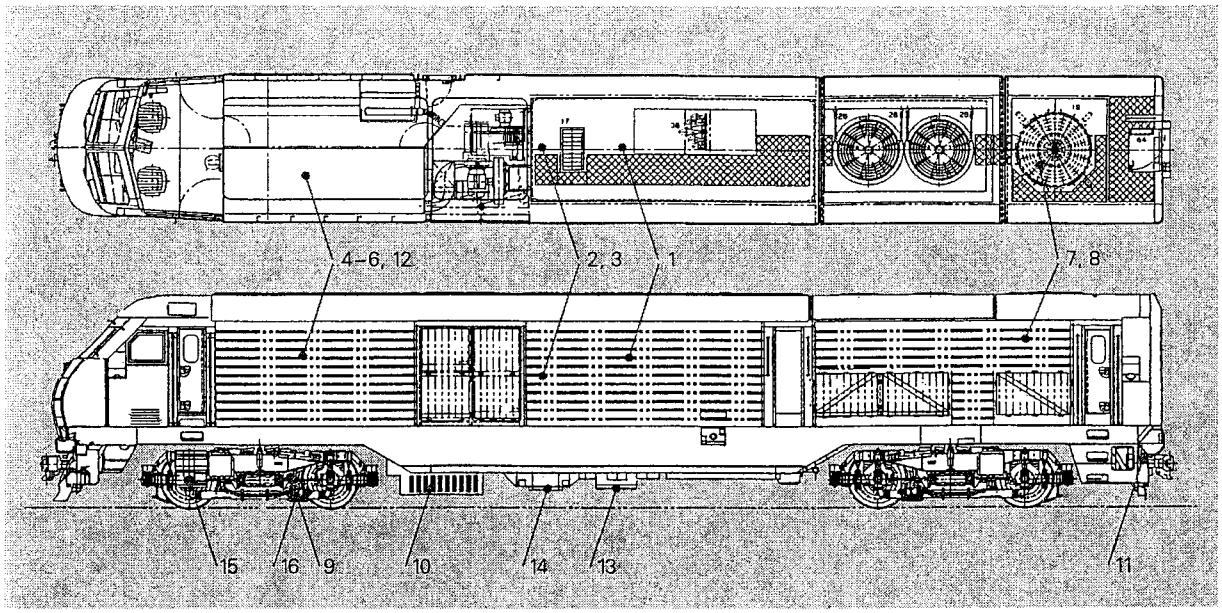
Development and supply:

Siemens AG, Erlangen, Germany
Siemens Fahrzeugtechnik, Kiel, Germany and Electro-Motive Division of General Motors Corp. (EMD), U.S.A.

The locomotives are to be used on urban and regional lines in the Greater New York area. The DM30AC Dual Mode locomotive is able to run in electric operation through the tunnel leading under the East River and straight into Manhattan.

DUEWAG
HPW
SIBIP

View of locomotive



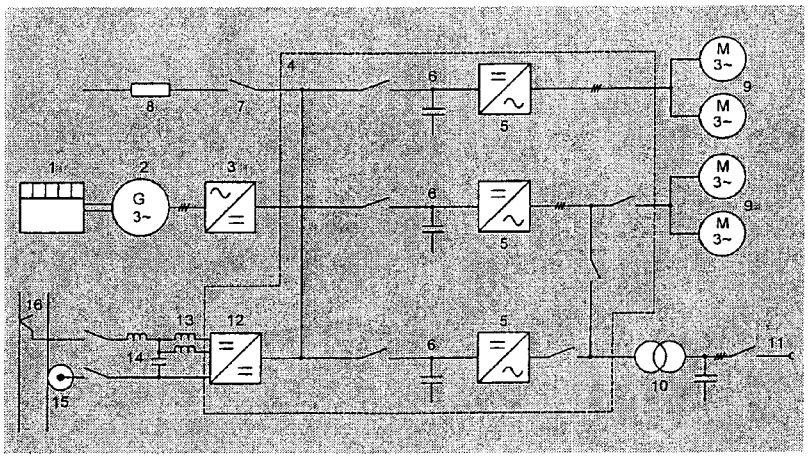
Equipment common to both models

1 Diesel engine
2 Generator
3 Rectifier
4 Inverter
5 GTO inverter
6 DC link capacitor
7 Brake contactor
8 Brake resistor
9 Traction motors
10 Head-end power transformer
11 Head-end power trainline

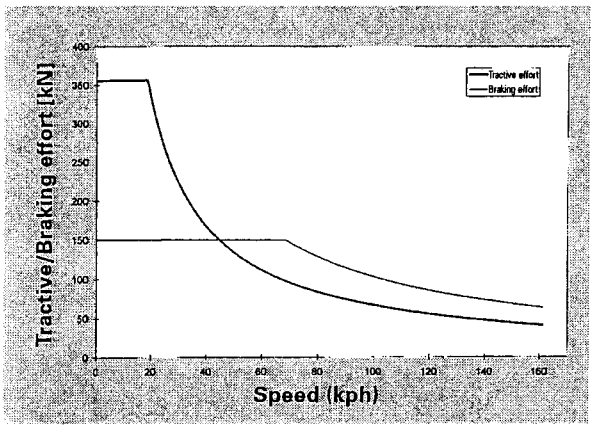
Additional equipment of DM30AC

12 Step-up chopper
13 Step-up chopper reactor
14 Line filter
15 Wheel axle brush
16 Current pickup shoe

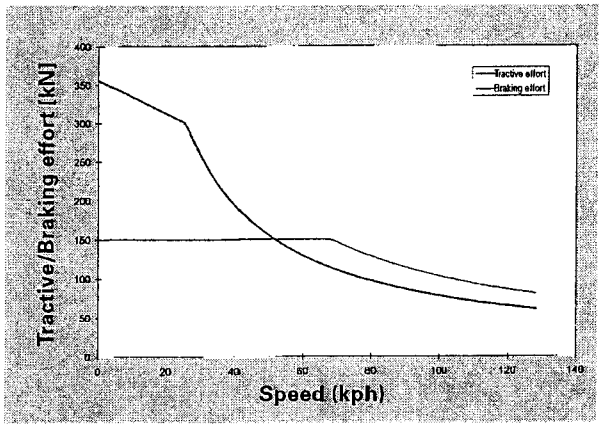
Main circuit diagram



Tractive and braking effort diagram

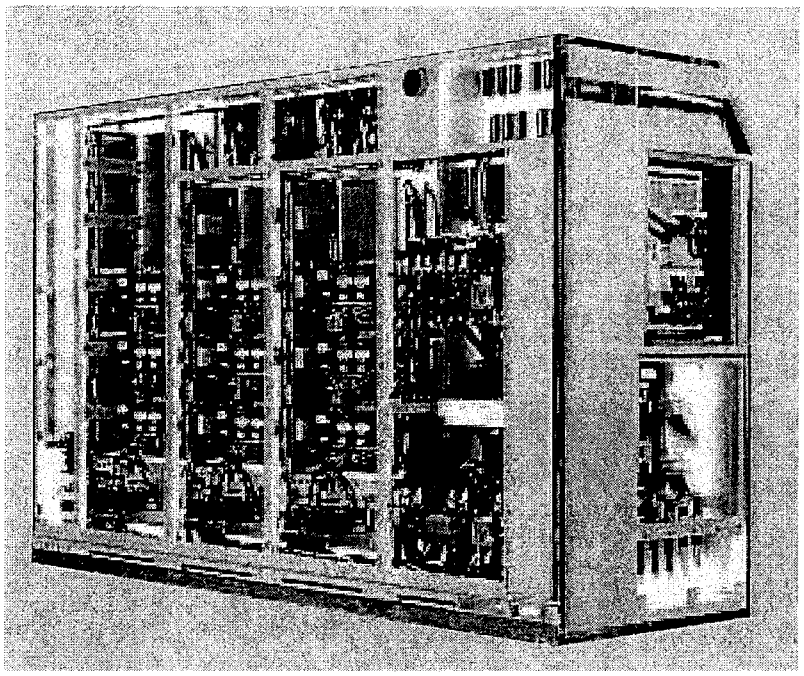


DE/DM30AC in diesel operation



DE30AC in electric operation

Inverter frame in the production shop



Supply to the trainline

The HEP trainline is fed with a 480 V three-phase AC, 60 Hz supply, as is customary in the U.S.A. The voltage is generated by a static inverter which is fed from the DC link of the traction inverters. As a result, the magnitude of the frequency and the voltage is independent on the speed of the diesel engine. Since the traction motors feed power back into the DC link circuit when braking, part of that braking energy can be used for supplying power to the train.

The inverter for supplying power to the trainline is identical to the traction inverters in terms of design and wiring. Therefore a traction inverter can be switched over within a matter of seconds to serve as trainline inverter in the event of a fault.

Converter for traction and train bus supply

The converter frame contains all necessary components:

- 9 GTO phase modules with gate units
- Step-up chopper modules (DM30AC)
- DC link capacitors
- Current and voltage transformers
- Snubber circuit resistors
- Switchgear for changeover of inverters
- 1 SIBAS® 32 traction control unit

A GTO phase module contains the power semiconductors for one inverter phase (2 GTO thyristors 4.5 kV/3 kA and two diodes connected in anti-parallel, as well as snubber diodes and capacitors). The gate units for the two GTO thyristors are mounted outside on the cover of the associated module.

The heat losses of the electrical components arranged in the module are dissipated by evaporation bath cooling. The boiling fluid is non-poisonous and environmentally compatible. The evaporation bath is hermetically sealed against the atmosphere.

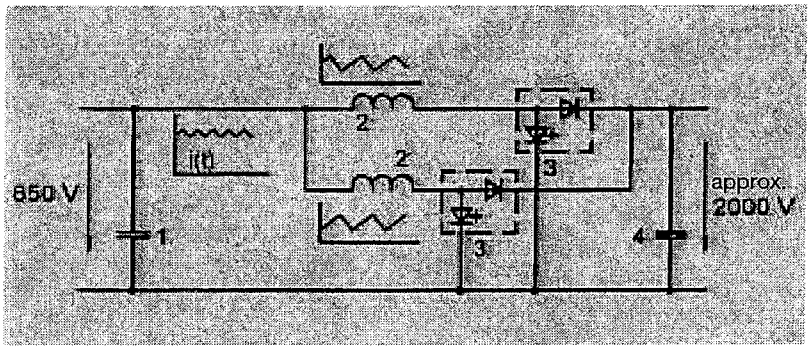
All components in the power section of the inverter are accessible from the center aisle through generously dimensioned doors.

The traction control unit is located in a separate space directly in the inverter frame. The door to this space is in the driver's cab.

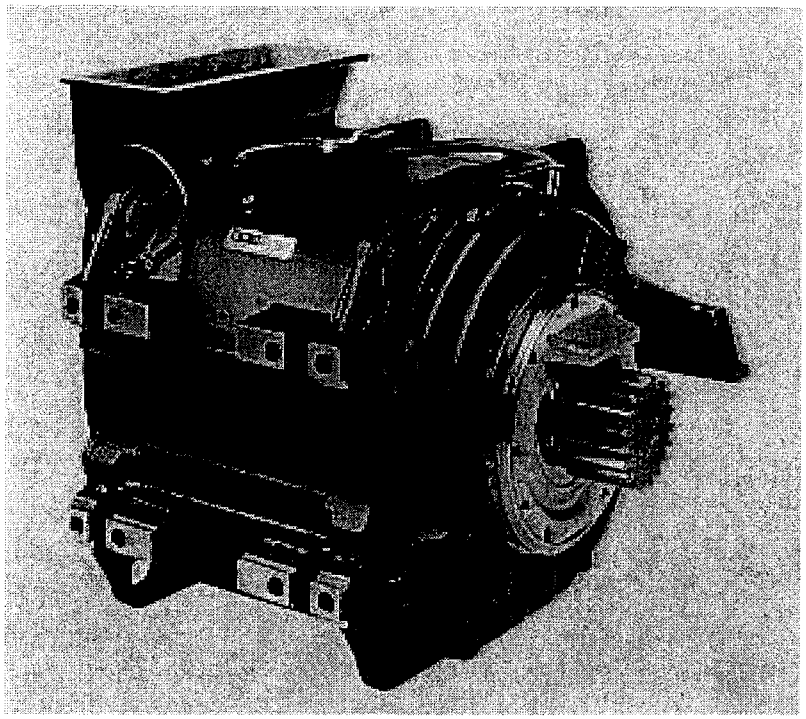
Step-up converter

When running on electric power, the DM30AC is supplied through a third rail with a voltage of 650 V DC. The single-quadrant controller installed in the converter steps up the voltage to the approx. 2000 V required by the DC link of the inverter. The step-up chopper reactor and the line filter reactor for the input current are mounted on the underframe of the locomotive. The charging device for the filter capacitor and the high-speed circuit-breaker are installed in a cabinet in the front part of the locomotive.

The full traction power is available in the supply range from 650 to 850 V. Operation between 500 and 600 V is at full current. If the voltage is below 500 V, the current is lowered to relieve the power system.



1 Input filter capacitor
2 Step-up chopper reactor
3 Step-up chopper module with GTO thyristor and free-wheeling diode
4 DC link capacitor



Traction motor 1TB2624

The four-pole three-phase squirrel-cage asynchronous motor was designed specially for the operating conditions in the U.S.A.:

- High axle loads
- Very high torque
- Poorer track quality than in Europe
- Long maintenance intervals

With the frameless design, the stator core is held together by two massive pressure plates and welded-on tie rods. The force-ventilated motor is supported on the axle by nose bearings. The stator winding is manufactured to insulation class H.

Starting torque	10,500 Nm
Continuous rating	536 kW
Maximum speed	3970 rpm

References

Wagner, Rudolf: Antriebstechnik für Diesellokomotiven in Nordamerika. ZEV + DET Glas. Ann., Heft 2/3 (1994)

Feilcke, Friedrich: Die elektrische Ausrüstung der Zweikraftlokomotive DM30AC für Long Island Rail Road. ZEV + DET Glas. Ann. (1998)

Bilz, Friedrich and Segerer, Holger: A Decade of Three-phase AC Traction Technology for Diesel-electric Locomotives in North-America – Market Developments and Technical Innovations. Translation of an article from ZEV + DET Glasers Annalen 121, No. 9/1997

Siemens AG
Transportation Systems
Locomotives
P.O. Box 32 40
D-91050 Erlangen
Tel. ++49-9131-7-4 37 44
Fax ++49-9131-7-2 36 91

Mobility for a moving world.
Siemens Transportation Systems

Siemens Aktiengesellschaft

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141U1323 170192 DB 5981.
Subject to change without prior notice

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President

368 Veterans Memorial Highway
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928
fecg@fecg.us

November 21, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Joseph Southard
Assistant Chief Engineer
Long Island Railroad
Track and Transportation Department
Hillside Maintenance Complex
9359 183rd Street, 4th Floor
Hollis, New York 11423

Re: Railroad Traffic Data

Dear Mr. Southard:

This firm is currently preparing a Draft Environmental Impact Statement (DEIS) for residential housing proposed for development at the northwest corner of Pulaski Road (a.k.a. County Road 11) and Elwood Road in the Hamlet of Greenlawn, Suffolk County, New York (Figure 1). As part of the DEIS, the noise environment at the proposed development is assessed for architectural mitigation evaluation purposes. In order to complete this noise assessment, we are respectfully requesting information on railway traffic characteristics on the following two (2) railroad lines of the Long Island Railroad:

- The Port Jefferson Branch, between Greenlawn and Northport stations, that will delimit the proposed development to the northwest.
- The railroad line that forks northward off the Port Jefferson Branch, proximate to Stony Hollow Road (Figure 1).

The following data is being requested, on a one-year basis, for incorporation into the DEIS:

1. Actual Number of Trains per day (weekday and weekend);
2. Number of Trains Operating Between 10:00 PM and 7:00 AM (weekday and weekend);
3. Average Number of Rail Cars Per Train (weekday and weekend);
4. Number and type of Locomotives Per Train;
5. Average Speed Per Train; and

6. Whistle and/or Horn-Blowing Locations.

Should you have any questions or comments, please feel free to contact me.

Sincerely,

Luc Derrendinger, Ph.D.
Environmental Scientist

LD/lm

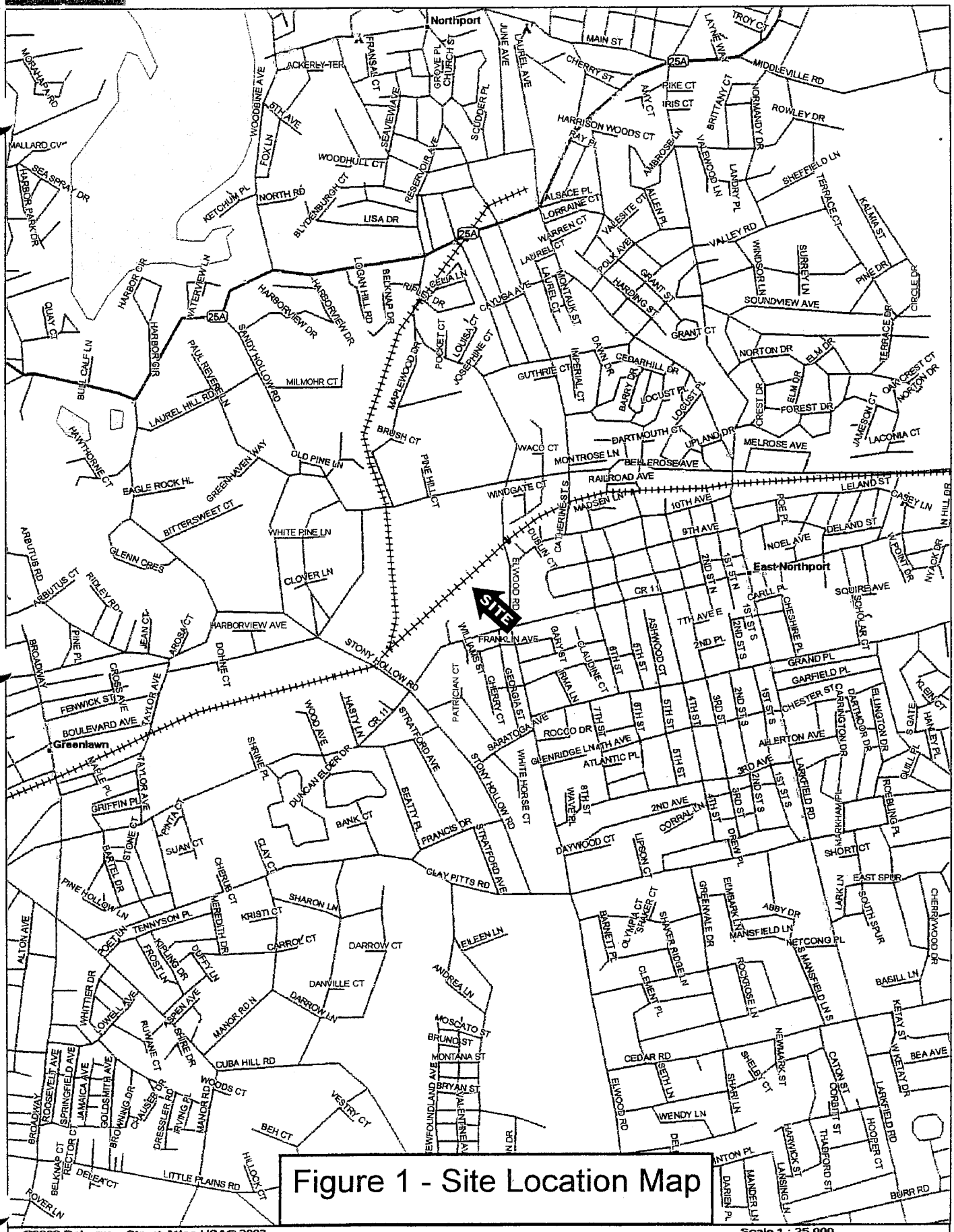

Figure 1 - Site Location Map

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www.delorme.com

TN
MN (13.9°W)

Scale 1 : 25,000
1" = 2080 ft

LONG ISLAND HOUSING PARTNERSHIP, INC. AND AFFILIATES

A Private Not-for-Profit Developer, Sponsor and Facilitator of Affordable Homes

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PDK Development Corp.

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KeySpan Corporation

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Reverend Thomas W. Goodhue
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William S. Davidson
Long Island Power Authority

Dr. Drew Bogner
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Newsday

Steven F. Philbin
North Fork Bank

Dr. Calvin O. Butts III
SUNY at Old Westbury

Eleidy Muniz
Washington Mutual

November 4, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ms. Janet Lewis
Director of Government and Community Affairs
Long Island Railroad
Public Affairs Department
Jamaica Station
Jamaica, New York 11435-4380

Jim Morgo
President
Chief Executive Officer

Peter J. Elkowitz, Jr.
Executive Vice-President
Chief Financial Officer

Counsel

Kevin S. Law
Nixon Peabody LLP

Howard Gross
Weinberg, Kaley, Gross & Pergament LLP

Re: Request for Information and Service Availability
Proposed 155-Unit Housing Development (Matinecock Court)

Dear Ms. Lewis:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. The Long Island Railroad borders the site to the northwest. The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, and I would appreciate your assistance in this regard. Pursuant to the 2000 U.S. Census, the average number of persons per owner-occupied unit in the East Northport CDP is 2.99 persons. Thus, the proposed development may potentially increase population by 464 persons. As a conservative estimate, it is anticipated that no more than 25 percent of the development population (i.e., 116 persons) would utilize the LIRR during the peak travel hours. Given the proximity of the Port Jefferson Branch to the subject parcel, it is likely that the 116 persons would utilize this rail line for transportation. Accepting these numbers, please advise if the proposed project would be expected to significantly impact the service capacity of the Port Jefferson Branch.

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

Furthermore, as the subject parcel is adjacent to the Long Island railroad tracks, a noise impact assessment would be performed as part of the DEIS. Specifically, the noise impact assessment would measure the potential noise impact of rail operations on the residential community and the findings of same would assist in developing appropriate mitigation measures (i.e., strategic placement of buildings, utilization of noise-attenuating building materials, and vegetative buffering at the property perimeter), if deemed necessary. Thus, please provide the following to assist in the noise impact assessment:

1. Estimated number of trains to pass the subject property on a weekday and weekend; and
2. The locations (proximate to the subject site) at which whistles are sounded.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,

Jim Morgo
President

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President

368 Veterans Memorial Highway
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928
fecg@fecg.us

November 21, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Joseph Southard
Assistant Chief Engineer
Long Island Railroad
Track and Transportation Department
Hillside Maintenance Complex
9359 183rd Street, 4th Floor
Hollis, New York 11423

Re: Railroad Traffic Data

Dear Mr. Southard:

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- The Port Jefferson Branch, between Greenlawn and Northport stations, that will delimit the proposed development to the northwest.
- The railroad line that forks northward off the Port Jefferson Branch, proximate to Stony Hollow Road (Figure 1).

The following data is being requested, on a one-year basis, for incorporation into the DEIS:

1. Actual Number of Trains per day (weekday and weekend);
2. Number of Trains Operating Between 10:00 PM and 7:00 AM (weekday and weekend);
3. Average Number of Rail Cars Per Train (weekday and weekend);
4. Number and type of Locomotives Per Train;
5. Average Speed Per Train; and

6. Whistle and/or Horn-Blowing Locations.

Should you have any questions or comments, please feel free to contact me.

Sincerely,

Luc Derrendinger, Ph.D.
Environmental Scientist

LD/lm

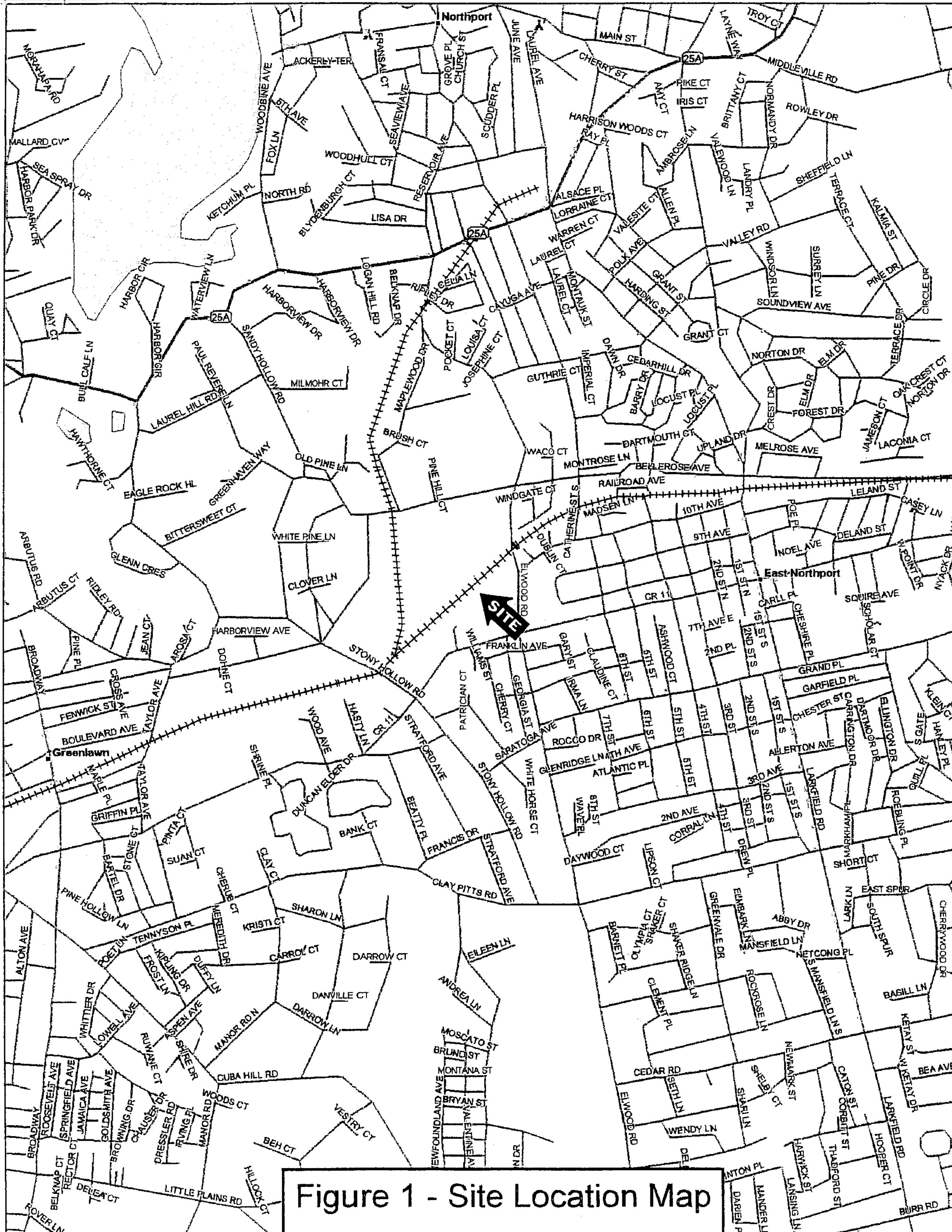

Figure 1 - Site Location Map

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TN
MN (13.9°W)

Scale 1 : 25,000
1" = 2080 ft

Luke Derrendinger

From: Freudenthal & Elkowitz Consulting Group, Inc. [fecg@fecg.us]
Sent: Tuesday, February 24, 2004 3:18 PM
To: lderrendinger@fecg.us
Subject: FW: Railroad Traffic Data

Ginny Watral
Vice President, Planning
Freudenthal & Elkowitz Consulting Group, Inc.
368 Veterans Memorial Highway
Commack, New York 11725
631-499-2222
631-499-5928/fax

-----Original Message-----
From: Danny Isla [mailto:DISLA@lirr.org]
Sent: Tuesday, February 24, 2004 1:23 PM
To: fecg@fecg.us
Cc: Kenneth V Rydzewski
Subject: Railroad Traffic Data

Mr. Luc Derrendinger, Ph.D.

This email is in reply to your letter dated November 21, 2003 in which you requested Railroad Traffic Data.

The data below is for our Port Jefferson Branch between Greenlawn and Northport Stations.

Actual number of trains per day: Weekday=44, Weekend=28

trains between 10pm-7am: Week Nights=15, Weekend Nights=8

avg. # of cars per train: Weekday=6, Weekend=3

Number and type of locomotive per train: DM30=Two, DE=One
Weight: DE = 296,878# , DM= 299,844#

Speed: 65MPH maximum

Whistle and horn blowing locations: All crossings...Broadway, Taylor Avenue, Elwood Road, & Larkfield Road.

As far as the track that forks to the north at Stony Hollow Road, there is no connection to our main track. Therefore, there is no Long Island Rail Road train traffic on that section.

Feel free to call or write if you have additional questions.

Danny Isla, P.E.
718.558.3229

ISO 9000: Engineering Quality Policy
The LIRR Engineering Department is committed to the planning, designing, and providing of a safe, efficient, and reliable commuter rail transportation service...

APPENDIX H

Correspondence from Municipal Agencies

NORTHPORT - EAST NORTHPORT UNION FREE SCHOOL DISTRICT

OFFICE OF THE ASSISTANT SUPERINTENDENT FOR BUSINESS

158 Laurel Avenue
Northport, New York
Telephone (631) 262-6632
Fax (631) 262-6892

Mailing Address:
Post Office Box 210
Northport, New York 11768

December 19, 2003

Mr. Jim Morgo
L.I. Housing Partnership, Inc. & Affiliate
180 Oser Avenue – Suite 800
Hauppauge, New York 11788

Dear Mr. Morgo:

As per your request, provided below are the responses to the information you requested as part of the SEQRA process.

1. The district operates ten school buildings including the Laurel Avenue School for pre-K special education, child care, community service, central office and other district programs as well as rental space. Provided below is a list of each school and the address:

Elementary Schools:

Bellerose Avenue Elementary School
253 Bellerose Avenue
East Northport, NY 11731-1625

Dickinson Avenue Elementary School
120 Dickinson Avenue
East Northport, NY 11731-1099

Fifth Avenue Elementary School
1157 Fifth Avenue
East Northport, NY 11731-2630

Norwood Avenue Elementary School
25 Norwood Road
Northport, NY 11768-3599

Ocean Avenue Elementary School
100 Ocean Avenue
Northport, NY 11768-3049

Pulaski Road Elementary School
623 Ninth Avenue
East Northport, NY 11731-2120

Middle Schools:

East Northport Middle School
1075 Fifth Avenue
East Northport, NY 11731-2600

Northport Middle School
11 Middleville Road
Northport, NY 11768-2220

High School:

Northport High School
154 Laurel Hill Road
Northport, NY 11768-3456

RECEIVED
DEC 23 2003
By

2. For the six elementary schools, our current enrollment is 3,009. Our total capacity will be 3,213 by September of 2004 (once the modular classrooms have been installed at the Fifth Avenue Elementary School). This is based upon average class size of 21. Therefore, districtwide, we currently have space for 204 additional students. Please note that our enrollment projection (which does not include your projection of an additional 48 school children) for the next five years is as follows:

School Year	Enrollment Projection	Total Change in # of Students
2003-2004*	**3,009**	
2004-2005	3,089	+80
2005-2006	3,168	+159
2006-2007	3,219	+210
2007-2008	3,209	+200
2008-2009	3,268	+259

***Current School Year**

Based upon the above chart, the district will need to find space for approximately 55 additional students by the 2008-2009 school year. (Calculation: 259 additional students less the 204 current spaces available.)

In order to accommodate any additional students, the district will need to consider the possibility of adding some classrooms, redistricting or raising class size to accommodate the increase in enrollment.

For the middle school, our current enrollment is 1,539 and our capacity is 1,941 based upon average class size of 25. Provided below is the enrollment projection for the middle school for the next five years.

School Year	Enrollment Projection	Total Change in # of Students
2003-2004*	1,539	
2004-2005	1,543	+4
2005-2006	1,516	-23
2006-2007	1,578	+39
2007-2008	1,675	+136

***Current School Year**

As can be determined from the above projections, we will be able to accommodate the projected number of students at our middle schools for the next five years. By the 2013-2014 school year, our projected enrollment is 1,805 leaving room for 136 additional students.

At the high school, our current enrollment is 1,844 and we'll have a capacity of 2,118 once construction is completed in September of 2004. The capacity assumes an average class size of 25. Provided below are the enrollment projections for the next five years:

School Year	Enrollment Projection	Total Change in # of Students
2003-2004*	**1,844**	
2004-2005	1,913	+69
2005-2006	2,041	+197
2006-2007	2,066	+222
2007-2008	2,062	+218

***Current School Year**

As the above chart shows, we will have space for students for the next five years. However, by the 2013-2014 school year the high school's enrollment is expected to rise to 2,325. Therefore, we will need to find space for an additional 207 students either through programmatic changes or by adding additional space.

3. Our per pupil expenditure for the 2002-2003 school year less any state aid or other revenue is as follows:

Grade Level	Tuition for Regular Ed Pupil	Tuition for Special Ed Pupil
Half Day Kdg.	$ 4,616	n/a
Full Day K – 6	$11,102	$33,729
Full Day 7 – 12	$12,852	$35,479

These figures represent the total cost for the taxpayer with the exception of transportation costs. We are in the process of calculating a per pupil cost for students. I'll forward this to your attention as soon as possible.

4. In the morning and afternoon, approximately 56 buses traverse the area in the vicinity of the project. Midday, approximately 25 buses pass through the area in question.

If I can be of future assistance, please contact me at 262-6632.

Sincerely yours,

Barbara M. Salatto

Barbara M. Salatto
Assistant Superintendent for Business

BMS:pm

EAST NORTHPORT FIRE DISTRICT

ONE NINTH AVENUE + EAST NORTHPORT, NEW YORK 11731
TELEPHONE: (631) 261-1177 FAX: (631) 261-0821

November 28, 2003

Kim A. Gennaro
Project Manager
Freudenthal & Elkowitz Consulting
368 Veterans Memorial Highway
Commack, NY 11725

Dear Ms. Gennaro:

I am in receipt of your Freedom of Information Request. Please be advised that I will provide you with the information requested upon the approval of the Board of Fire Commissioners.

Sincerely,
Thelma G. Haller
Thelma G. Haller
Secretary

EAST NORTHPORT FIRE DISTRICT

ONE NINTH AVENUE + EAST NORTHPORT, NEW YORK 11731
TELEPHONE: (631) 261-1177 FAX: (631) 261-0821

Dominick Venuti
Chairman
11 Eastover Drive
East Northport
NY 11731-4501
631 368-4974

William O'Loughlin
Vice-Chairman
16 Purdy Avenue
East Northport
NY 11731-4501
631 368-5366

Bruce Grant
Commissioner
16 Cordell Place
East Northport
NY 11731-4501
631 757-5517

Charles Warringer
Commissioner
35 Dickinson Avenue
East Northport
NY 11731-4501
631 757-5995

William Musto
Commissioner
510 Fifth Street
East Northport
NY 11731-4501
631 757-2164

Thelma G. Haller
Secretary/Treasurer
30 Bellecrest Avenue
East Northport
NY 11731-4501
631 261-1177

Douglas K. McNally
Attorney
54 Main Street
PO Box 479
Northport, NY 11768
631 261-9400

December 5, 2003

Freudenthal & Elkowitz Consulting Group, Inc.
368 Veterans Memorial Highway
Commack, NY 11725

Dear Ms. Gennaro:

This is in reply to your Freedom of Information Request dated November 20, 2003. Please note the following:

1. Number of active members in the East Northport Fire District: 101
2. Area of service for the Fire District: 14.5 miles
3. Average number of fire calls annually: 45
   Average number of rescue calls annually: 1,200
4. Number of households and businesses in the District: 10,000
5. Average response time for the District: Not available
6. Number of fire and rescue apparatus used by the Fire District: 23
7. Ambulance service is provided by the Fire District
8. Names of receiving hospitals: Huntington Hospital, St. Catherine of Siena Medical Center and the Veterans Administration Medical Center.

If you require further information, please contact me at (631) 261-1177.

Sincerely,

Thelma G. Haller

Thelma G. Haller
District Secretary-Treasurer

NORTH SHORE - LONG ISLAND JEWISH HEALTH SYSTEM

HUNTINGTON HOSPITAL

270 PARK AVENUE, HUNTINGTON, NEW YORK 11743-2799
(631) 351-2000 • FAX (631) 351-2586 • http://www.hunthosp.org

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*Past Chairman of the Board

November 25, 2003

Jim Morgo, President
Long Island Housing Partnership, Inc.
180 Oser Avenue
Hauppauge, NY 11788

Dear Mr. Morgo:

In response to your request dated November 4, 2004, I am happy to provide you with information about Huntington Hospital.

Huntington Hospital is a 398 bed full-service, not-for-profit, community hospital, serving Huntington Township and the surrounding communities since 1916. It is staffed by over 1,700 employees and affords attending privileges to nearly 500 local physicians.

Its primary mission is to provide a full range of inpatient, outpatient, and specialized healthcare services within an environment nurtured by respect and safety. Services are provided to all patients regardless of race, color, religion, age, national origin, disability or sexual orientation, or ability to pay. The hospital provides a full range of services, with a special emphasis on care of the cancer patient, cardiac care, maternity and neonatal care, and specialized surgical procedures including complex orthopaedic surgery. Recent achievements include certification of the cancer program as a Comprehensive Community Cancer Center by the American College of Surgeons' Commission on Cancer; accreditation by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the receipt of a New York State Department of Health grant to provide an innovative educational/support program to women at high risk for developing breast cancer.

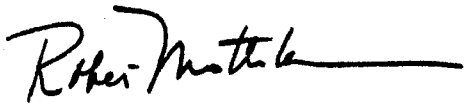
Huntington Hospital serves patients of every age, from newborns through geriatrics. Thirty-nine percent of the hospital's patients are covered by Medicare, indicating that they are over the age of 65 or are disabled. Fifty-nine percent of the patients we serve are women; 18 percent are racial or ethnic minorities. Six percent of hospital patients are covered by Medicaid, indicating a degree of financial need. In addition, $9,865,000 worth of bad debt/charity care was provided in 2002 (source: 2002 Huntington Hospital Annual Report).

The hospital's primary service area is Huntington Township, New York, a 93 square mile area in Suffolk County with a population of 195,289, according to the 2000 United States Census. Although a relatively affluent area, there are large pockets of poverty within the Township, which the hospital serves through its freestanding primary care center, the Dolan Family Health Center. Located in Greenlawn, the Dolan Center is one of the hospital's flagship programs and is Long Island's only charitably supported, hospital owned healthcare center for the uninsured and underinsured, the Center logged more than 25,000 visits in 2002.

In recognition of the changes in medical and in particular surgical technology, the hospital has embarked on a $40 million, 72,000 square foot surgical services and renovation. Scheduled for completion in early 2005, this project will include, but is not limited to 12 new operating rooms, a spacious Ambulatory Surgery Unit, a new Pediatric Inpatient and Ambulatory Care Unit and a wide variety of expanded patient and physician friendly services. I am confident that this project will fully prepare us to deal with both the present and future needs of our community in the 21st Century.

If you need any additional information, please call me directly at (631) 351-7040 x106.

Sincerely,



Robert Mottola, Vice President
Development and Community Relations

ST. CATHERINE OF SIENA
Medical Center

50 Route 25A ❖ Smithtown, NY 11787
Phone: (631) 862-3000 Fax: (631)862-3105

November 20, 2003

Jim Morgo
President
Long Island Housing Partnership, Inc.
180 Oser Ave.
Hauppauge, NY 11788

Dear Mr. Morgo,

Attached please find (1) description of services offered at St. Catherine of Siena Medical Center; (2) facts sheet, including employed personnel, number of beds, etc.

Our current occupancy rate averages 75%.

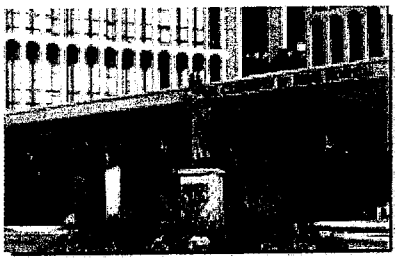
A complete range of services is available to all members of the community.

Please visit our website at stcatherines.chsli.org for updated information.

Sincerely,

Nancy Simmons
COO

About Us



St. Catherine of Siena Medical Center is located on 110 acres on the north shore of Long Island in Smithtown, New York. Our campus consists of a 311 bed hospital, 240 bed skilled nursing home, a medical office building and Siena Village, a 298 unit apartment complex for seniors and the physically disabled.

In February 2000, Catholic Health Services of Long Island (CHS) purchased the campus from Episcopal Health Services. The new Medical Center was named St. Catherine of Siena, after Catherine Benincasa of Siena, Italy who was noted for her work as a nurse, mediator and spiritual author.

In order to reflect our mission commitment to the communities that we serve, extensive renovations were initially made to the lobby, chapel, and patient care units. The Endoscopy Suite, located in our medical office building, was opened in May 2002. The Emergency Department was renovated in March 2003 to enhance patient flow and efficiency. In May 2003 a state-of-the-art Cardiac Catheterization Unit opened, providing advanced technology that delivers the finest imaging in the industry.

St. Catherine of Siena Medical Center offers a full range of medical and surgical services as well as long-term residential care, sub-acute care, rehabilitation, hospice care and apartments for seniors and physically disabled individuals.

Home
About Us
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CEO Message
Fact Sheet
History
Locations
Contacts
Services
Satellite Organizations
Ways to Give
Calendars
Press Releases
Careers
Pastoral Care

Fact Sheet

St. Catherine of Siena Medical Center

Medical Center Opened: February 29, 2000

Statistics:

Ambulatory Surgery Procedures: 7085

Admissions: 9,951

Psychiatric: 828

Maternity: 1733

Babies Born: 1679

Endoscopy Procedures: 8,187

Emergency Visits: 28,403

Emergency Admissions: 7,150

Hospital Average Length of Stay: 5.6 days

Medical Staff: 640

Number of Beds: 311

Number of Employees

Hospital: 1470

Nursing Home: 343

Village: 11

Total: 1824

Nursing Staff: 557

Volunteer Hours: 34,000

Accredited by:

The Joint Commission on Accreditation of Healthcare Organizations

The American College of Radiologists

A Member of:

Catholic Health Services of Long Island

Greater New York Hospital Association

Healthcare Association of New York

Long Island Health Network

Nassau/Suffolk Hospital Council

The American Hospital Association

Approved by:

New York State Department of Health

New York State Department of Mental Hygiene

New York State Department of Alcohol and Substance Abuse

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Services

Alcohol and Substance Abuse Unit
(631) 862-3184

Ambulatory Surgery Unit (ASU)
(631) 862-3033

Anesthesia
(631) 862-3540

Auxiliary Volunteer Department
(631) 862-3015

Cafeteria
The Oasis Café (631) 862-3006

Cancer Care Unit (Oncology)
(631) 862-3310

Cardiac Services
(631) 862-3569

Care Management / Performance Improvement
(631) 862-3510

Community Relations
(631) 862-3523

Dialysis Unit
(631) 862-3707

Emergency Department
(631) 862-3111

Endoscopy
(631) 862-3636

Gift Shop
(631) 862-3013

Intensive Care Units (ICU/CCU)
(631) 862-3577 (ICU family call line) (631) 862-3588 (CCU family call line)

MRI / CT Services

Medicine

Nursing Home
52 Route 25A Smithtown, New York 11787 (631) 862-3900

Nuclear Medicine / Radiation Therapy

Parkinson's Out-Patient Program
(631) 862-3530

Pastoral Care
(631) 862-3104

Patient Advocate
(631) 862-3251

Physical Therapy
(631) 862-3530

Physician Referral Service
(631) 862-3042

Radiology - Angiography

Bone Densitometer

Diagnostic

Radiology
(631) 862-3222

Mammography

Ultrasound

Surgery

Telephone Service
(631) 862-3044

Television
(631) 862-3014

Valet Parking
(631) 862-2277

Woman Child Care Center
(631) 862-3131

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COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
COUNTY EXECUTIVE

JOHN C. GALLAGHER
POLICE COMMISSIONER

POLICE DEPARTMENT

November 21, 2005

James Morgo
President
Long Island Housing Partnership
180 Oser Avenue, Suite 800
Hauppauge, NY 11788

Dear Mr. Morgo:

This is in response to your recent correspondence to Police Commissioner John Gallagher, regarding a 155-unit housing development to be located on the northwest corner of Elwood Road and Pulaski Road in East Northport.

In response to your questions:

1. The subject parcel is within the jurisdiction of the Second Precinct.

2. The number of sworn officers in the Second Precinct is approximately 235.

3. We can not disclose the numbers and types of equipment assigned to the precinct. Suffice it to say the Second Precinct has the requisite equipment to carry out its mission.

I hope you find these answers responsive to your needs.

Very truly yours,

Dominick Varrone
Inspector
Commanding Officer
Second Precinct

30 YAPHANK AVENUE, YAPHANK, NEW YORK 11980 - (631) 852-6000

SUFFOLK COUNTY WATER AUTHORITY

Herman J. Miller
Deputy CEO for Operations

Administrative Offices: 4060 Sunrise Highway, Oakdale, NY 11769-0901
(516) 589-5200
Fax No. (516) 563-0358

RECEIVED
DEC 10 2003
By

December 8, 2003

Mr. Jim Morgo, President
Long Island Housing Partnership, Inc. and Affiliates
180 Oser Avenue, Suite 800
Hauppauge, NY 11788

Dear Mr. Morgo:

The Authority has reviewed the Long Island Housing Partnership's request for water availability for the proposed 155 housing unit development (Matinecock Court). You have advised that the project will need 36,000 gallons per day for domestic use, 25,000 gallons per day for irrigation during the growing season and fire line requirement of 300 gallons per minute. The Authority can provide the water required for this project.

You did not provide me any indication of the required fire hydrant flow. This happens to be a strong area for the Authority's distribution system. We would have over 2,000 gallons per minute available for fire protection.

Once you are ready to move forward with the project, please remember to provide the RPZ submittal as soon as possible in order that we can make sure that this aspect doesn't cause any unnecessary delay.

If you should have any questions, please contact me.

Very truly yours,

Herman J. Miller, P.E.
Deputy CEO for Operations

HJM:ms
cc: Stephen M. Jones
Steve Burns
Cliff Foy

TOWN OF HUNTINGTON

FRANK P. PETRONE, *Supervisor*

ENVIRONMENTAL WASTE MANAGEMENT

December 11, 2003

RECEIVED
DEC 16 2003
By

Mr. Jim Morgo
President
LI Housing Partnership, Inc.
180 Oser Avenue, Suite 800
Hauppauge, New York 11788

Dear ~~Mr. Morgo~~ Jim.

I am in receipt of your letter regarding the development of 155 housing units in East Northport. The increase in refuse generation and disposal due to the project will not have negative impact on the towns solid waste disposal capacity.

The Town has an established Refuse District in which all one, two and three family residential homes, townhouses and condominiums are included. These properties receive weekly curbside refuse, recycling and yardwaste collection. These dwellings are charged for the service via a benefit tax.

The question I have at this time is, will the units be constructed so that each unit will have direct curbside access? Or will they be multi-level apartment style with some unit entrances on the second floor? If so, what plans have been made for storage of refuse prior to collection? This will determine whether or not they can be incorporated in to the District. To facilitate this determination, please send a copy of the draft plans to Audrey Gallo at: 99 Townline Road, East Northport New York 11731.

Thank you for your cooperation in the matter.

Sincerely,

Phil

Philip C. Nolan
Director Environmental Waste Management

PCN/AMG
cc: A. Gallo

100 MAIN STREET • HUNTINGTON, N.Y. 11743-6991 • (631) 351-3186 • TELEFAX (631) 351-3330

KEYSPAN
ENERGY

KeySpan Energy
1650 Islip Avenue
Brentwood, NY 11717

RECEIVED
NOV 13 2003

November 10, 2003

Long Island Housing Partnership Inc.
180 Oser Ave, Suite 800
Hauppauge, NY 11788

Attn: Jim Morgo, President

Re: 155 unit Housing Development - Matinecock Ct., E Northport

Dear Mr. Morgo,

Please be advised that the KeySpan Energy Corporation will provide gas service to the above referenced project in accordance with our filed tariffs and schedules in effect at the time service is required.

If you have questions or require additional information, please feel free to contact me at (631) 348-6282.

Sincerely,

Annemarie Westerlind
Residential New Construction Representative

Cc: J. Madsen

LIPA
Long Island Power Authority

1650 Islip Avenue
Brentwood, NY 11717

RECEIVED
DEC 9 2003
By

December 4, 2003

Mr. Jim Morgo, President
Long Island Housing Partnership, Inc.
180 Oser Avenue, Suite 800
Hauppauge, NY 11788

Re: Letter of Availability: Proposed 155-Unit Housing Development (Matinecock Ct.), N/W corner Elwood Rd., and Pulaski Rd., East Northport

LIPA Job # T100346870

Dear Sir:

As requested, please be advised that the Long Island Power Authority will provide service to the above referenced project in accordance with our filed tariff and schedules in effect at the time service is required.

Please feel free to contact Lori Murphy at (631) 348-6044 if you require any further information.

Very truly yours,

W. R. Moir

William R. Moir
Regional Supervisor
Western Suffolk Division

WRM/ljm

Cc: Linda Bianculli – LIPA, Uniondale
Bill Davidson – LIPA, Uniondale
Rich Inserra – EDC, Greenlawn

Correspondence to Municipal Agencies

LONG ISLAND HOUSING PARTNERSHIP, INC. AND AFFILIATES

A Private Not-for-Profit Developer, Sponsor and Facilitator of Affordable Homes

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Newsday

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North Fork Bank

Dr. Calvin O. Butts III
SUNY at Old Westbury

Eleidy Muniz
Washington Mutual

November 4, 2003

Jim Morgo
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Chief Executive Officer

Peter J. Elkowitz, Jr.
Executive Vice-President
Chief Financial Officer

Counsel

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Nixon Peabody LLP

Howard Gross
Weinberg, Kaley, Gross & Pergament LLP

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Dr. William J. Brosnan
Superintendent of Schools
Northport-East Northport Union Free School District
158 Laurel Avenue
P.O. Box 210
Northport, New York 11768

Re: Service Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear Dr. Brosnan:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. Based on published demographic factors, the proposed project would generate an estimated 23 school children,[1] and some of these children will have been more than likely already attending East Northport schools. That is, they will not be "new" students.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS must examine relevant environmental and social issues, including the existing conditions and impacts upon schools, and I would appreciate your assistance in this regard. Please advise, in writing, on the following:

1. List of all schools in the Northport-East Northport Union Free School District;
2. Enrollment and capacity of the School District;
3. Per pupil expenditure for the 2002-2003 school year and percentage of this figure obtained from property taxes;

[1] Demographic factors for single-family (attached) housing, for the State of New York are as follows: 0.13 school children per one-bedroom unit, 0.11 school children per two-bedroom unit, 0.33 school children per three-bedroom unit, and 0.74 school children per four-bedroom unit.

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

4. Please describe any school bus routes which traverse the area in the vicinity of the project site; and
5. Any other information you think would be appropriate for evaluation in the DEIS.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,

Jim Morgo
President

LONG ISLAND HOUSING PARTNERSHIP, INC. AND AFFILIATES

A Private Not-for-Profit Developer, Sponsor and Facilitator of Affordable Homes

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Catholic Health Services of L.I.

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Chicago Title Insurance Company

Jacqueline B. O'Garrow
Fannie Mae

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Fleet Bank

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Peter J. Elkowitz, Jr.
Executive Vice-President
Chief Financial Officer

Counsel

Kevin S. Law
Nixon Peabody LLP

Howard Gross
Weinberg, Kaley, Gross & Pergament LLP

November 21, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Dr. William J. Brosnan
Superintendent of Schools
Northport-East Northport Union Free School District
158 Laurel Avenue
P.O. Box 210
Northport, New York 11768

Re: Proposed 155-Unit Housing Development (Matinecock Court)

Dear Dr. Brosnan:

In furtherance to our correspondence of November 4, 2003 (copy attached), please be advised that the projected number of school children provided to you has been revised. Based on published demographic factors from Rutgers University (Center for Urban Policy Research) for garden apartment/rental units and condominium/ownership, the proposed project would be expected to generate an estimated 48 school children. A description of same follows:

Garden Apartment - Rental

No. of Bedrooms	Unit Breakdown	School Children Per Unit	Total
1	12	0.05	0.60
2	44	0.23	10.12
3	18	0.86	15.48
4	4	0.74[1]	2.96
Total Rental	78		29.16

[1] Figures not available for four-bedroom rental unit. Therefore, the factor for single-family attached housing (four-bedrooms) was used.

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

Condominium - Ownership

No. of Bedrooms	Unit Breakdown	School Children Per Unit	Total
1	8	0.05	0.40
2	46	0.14	6.44
3	19	0.39	7.41
4	4	0.74[2]	2.96
Total Ownership	77		17.21

We are also requesting at this time that information be provided on the District's per pupil expenditure in 2002-03 (less NY State Aid).

Should you have any questions or comments, please feel free to contact me. Thank you.

Sincerely,

Jim Morgo
President

JM:jp

[2] Figures not available for four-bedroom condominium unit. Therefore, the factor for single-family attached housing (four-bedrooms) was used.

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President

368 Veterans Memorial Highway
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928
fecg@fecg.us

November 4, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Thomas Mattos, Chief
East Northport Fire District
One Ninth Avenue
East Northport, New York 11731

Re: Information Request

Dear Chief Mattos:

This firm is currently preparing a Draft Environmental Impact Statement (DEIS) for a residential development within your service area, and we are respectfully requesting information on fire services. Please advise, in writing, on the following:

1. Number of active members in the East Northport Fire District;
2. Location of the facility that would serve the site;
3. Area of service for the Fire District;
4. Average number of fire and rescue calls responded to in the District on an annual basis;
5. Number of households and businesses in the District;
6. Average response time for the District;
7. Number and type of equipment and vehicles used by the Fire District;
8. Is ambulance service provided by the Fire District?; and
9. The name of the receiving hospitals.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 499-2222 if you should have any questions concerning this request.

Sincerely,

FREUDENTHAL & ELKOWITZ
CONSULTING GROUP, INC.

K Gennaro

Kim A Gennaro
Project Manager

KAG/th

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President

368 Veterans Memorial Highway
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928
fecg@fecg.us

November 10, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Board of Fire Commissioners
East Northport Fire District
One Ninth Avenue
East Northport, New York 11731

Re: Freedom of Information Request

Dear Sir/Madam:

In accordance with a telephone request by Chief Thomas Mattos, we are hereby submitting a formal request to the Board of Fire Commissioners, pursuant to the Freedom to Information Law, to secure the information sought in our correspondence of November 4, 2003. As explained in our November 4, 2003 correspondence, this firm is currently preparing a Draft Environmental Impact Statement (DEIS) for a residential development within your service area, and we are respectfully requesting information on fire services. The following information is being requested for incorporation into the DEIS:

1. Number of active members in the East Northport Fire District;
2. Location of the facility that would serve the site;
3. Area of service for the Fire District;
4. Average number of fire and rescue calls responded to in the District on an annual basis;
5. Number of households and businesses in the District;
6. Average response time for the District;
7. Number and type of equipment and vehicles used by the Fire District;
8. Is ambulance service provided by the Fire District?; and
9. The name(s) of the receiving hospitals.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 499-2222 if you should have any questions concerning this request.

Sincerely,

FREUDENTHAL & ELKOWITZ
CONSULTING GROUP, INC.

K Gennaro

Kim A Gennaro
Project Manager
KAG/th

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President

368 Veterans Memorial Highway
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928
fecg@fecg.us

November 20, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. William O'Loughlin
Board of Fire Commissioners
East Northport Fire District
One Ninth Avenue
East Northport, New York 11731

Re: Freedom of Information Request

Dear Mr. O'Loughlin:

Pursuant to our telephone conversation of November 19, 2003, enclosed herewith is the Application for Public Access for Records. As requested in correspondence of November 4, 2003 to Chief Mattos and November 10, 2003 to the Board of Fire Commissioners (copies enclosed), this firm is currently preparing a Draft Environmental Impact Statement (DEIS) for a residential development within your service area, and we are respectfully requesting information on fire services. The following information is being requested for incorporation into the DEIS:

1. Number of active members in the East Northport Fire District;
2. Area of service for the Fire District;
3. Average number of fire and rescue calls responded to in the District on an annual basis;
4. Number of households and businesses in the District;
5. Average response time for the District;
6. Number and type of equipment and vehicles used by the Fire District;
7. Is ambulance service provided by the Fire District?; and
8. The name(s) of the receiving hospitals.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 499-2222 if you should have any questions concerning this request.

Sincerely,

FREUDENTHAL & ELKOWITZ
CONSULTING GROUP, INC.

K. Gennaro

Kim A Gennaro
Project Manager
KAG/lm

APPLICATION FOR PUBLIC ACCESS TO RECORDS

TO: Records Access Officer
East Northport Fire District
One Ninth Avenue
East Northport, NY 11731

I hereby apply to inspect the following record:
See attached correspondence

Signature

Freudenthal & Elkowitz Consulting Group, Inc.
Representing

(631) 499-2222
Telephone Number

November 20, 2003
Date

368 Veterans Memorial Highway
Mailing Address

Commack, New York 11968
City, State, Zip Code

FOR FIRE DISTRICT USE ONLY

APPROVED _____

DENIED (for reason(s) checked below)

_____ Confidential Disclosure
_____ Unwarranted Invasion of Personal Privacy
_____ Record of which this Agency is legal custodian cannot be found
_____ Record not maintained by this Agency
_____ Exempted by Statute other than the Freedom of Information Act
_____ Other (specify)_____

_____ Part of Investigatory Files
_____ Would impair present or imminent contract awards or collective bargaining negotiations
_____ Trade Secrets

Signature Title Date

NOTICE: YOU HAVE A RIGHT TO APPEAL A DENIAL OF THIS APPLICATION WITHIN 30 DAYS TO THE BOARD OF FIRE COMMISSIONERS WHO MUST FULLY EXPLAIN THEIR REASONS FOR SUCH DENIAL IN WRITING WITHIN 10 DAYS OF RECEIPT OF AN APPEAL

I HEREBY APPEAL:

Signature Date

Application for Public Access to Records - Attachment

The following information is being requested:

1. Number of active members in the East Northport Fire District;
2. Area of service for the Fire District;
3. Average number of fire and rescue calls responded to in the District on an annual basis;
4. Number of households and businesses in the District;
5. Average response time for the District;
6. Number and type of equipment and vehicles used by the Fire District;
7. Is ambulance service provided by the Fire District?; and
8. The name(s) of the receiving hospitals.

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Counsel

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Nixon Peabody LLP

Howard Gross
Weinberg, Kaley, Gross & Pergament LLP

November 4, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Robert Mottola, Vice President
Development and Community Relations
Huntington Hospital
270 Park Avenue
Huntington, New York 11743-2799

Re: Service Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear Mr. Mottola:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units. In addition, the proposed development would include a playground/recreation area, an on-site community center building, day care center, a manager's apartment, an on-site sewage treatment system and a recharge basin.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, such as health care and emergency services, and I would appreciate your assistance in this regard. Please advise, in writing, on the following:

1. The services that are offered by the Huntington Hospital
2. The number of personnel employed at Huntington Hospital;
3. The number of beds at your facility;
4. The occupancy rate; and

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

5. Confirmation that services could be provided to future residents of the proposed development.

Thank you for your assistance in this matter. I know this request is an imposition, but it is a necessary imposition. And, as I am sure you know, the need for homes affordable to workers is a critical problem for Long Island. What you may not know is that the Long Island Housing Partnership has sold more of its homes to health care workers than to any other segment of the Long Island Workforce. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,

Jim Morgo
President

JM:jp

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November 4, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ms. Nancy Simmons
Chief Operating Officer
St. Catherine's of Siena Hospital
Route 25A
Smithtown, New York 11787

Re: Service Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear Ms. Simmons:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units. In addition, the proposed development would include a playground/recreation area, an on-site community center building, day care center, a manager's apartment, an on-site sewage treatment system and a recharge basin.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, such as health care and emergency services, and I would appreciate your assistance in this regard. Please advise, in writing, on the following:

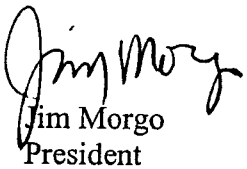
1. The services that are offered by the St. Catherine's of Siena Hospital
2. The number of personnel employed at St. Catherine's of Siena Hospital;
3. The number of beds at your facility;
4. The occupancy rate; and

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

5. Confirmation that services could be provided to future residents of the proposed development.

Thank you for your assistance in this matter. I know this request is an imposition, but it is a necessary imposition. And, as I am sure you know, the need for homes affordable to workers is a critical problem for Long Island. What you may not know is that the Long Island Housing Partnership has sold more of its homes to health care workers than to any other segment of the Long Island workforce. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,



Jim Morgo
President

JM:jp

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VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. John C. Gallagher
Suffolk County Police Department
Office of the Chief of Patrol
30 Yaphank Avenue
Yaphank, New York 11980

Re: Service Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear ~~Commissioner~~ John Gallagher:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. As such, the subject parcel is situated within the jurisdiction of the Second Precinct.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, including police protection, and I would appreciate your assistance in this regard. Please advise, in writing, on the following:

1. Confirmation that the subject parcel is within the jurisdiction of the Second Precinct and that services can be provided to the proposed development;
2. The number of personnel; and
3. The numbers and types of equipment.

Thank you for your assistance in this matter. You are aware of the need for affordable homes in Suffolk County. Your cooperation here will contribute to the production of additional homes. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,

Jim Morgo
President

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

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Counsel

Kevin S. Law
Nixon Peabody LLP

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Weinberg, Kaley, Gross & Pergament LLP

November 4, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Herman Miller, P.E.
Deputy CEO of Operations
Suffolk County Water Authority
4060 Sunrise Highway
Oakdale, New York 11769-0901

Re: Water Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear ~~Mr. Miller~~ Herman:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units. In addition, the proposed d evelopment w ould include a playground/recreation area, an on-site community center building, day care center, a manager's apartment, an on-site sewage treatment system and a recharge basin.

According to the project engineer, the projected potable water use for the proposed development would be 225 gallons per day (gpd) per unit or 36,000± gpd for the development. In addition, the proposed housing development would include an irrigation system. Assuming that 75 percent of the proposed landscaped areas (i.e., 6.40 acres) are irrigated, and the irrigated area receives one inch of water per week for approximately 26 weeks, an additional 173,080± gallons would be utilized each week. Therefore, total water use for the proposed development would be estimated at 17,640,087± gallons annually.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As

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EQUAL HOUSING OPPORTUNITY

required by the State Environmental Quality Review Act (SEQRA), relevant environmental issues, including water availability, must be examined. Thus, we are respectfully requesting written confirmation of the SCWAs ability to provide the required water.

Than you for your assistance in this matter. Please feel free to contact me at (631) 435-4710 with any questions regarding this request.

Sincerely,

Jim Morgo
President

Cc: Steve Jones, CEO

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Washington Mutual

November 21, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Philip C. Nolan, Director
Town of Huntington
Department of Environmental Waste Management
Town Hall
100 Main Street
Huntington, New York 11743

Jim Morgo
President
Chief Executive Officer

Peter J. Elkowitz, Jr.
Executive Vice-President
Chief Financial Officer

Counsel

Kevin S. Law
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Re: Request for Information
Proposed 155-Unit Housing Development (Matinecock Court)

Dear Mr. Nolan:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, and I would appreciate your assistance in this regard. Pursuant to the 2000 U.S. Census, the average number of persons per owner-occupied unit in the Town of Huntington is 2.99 persons, and 2.50 persons for renter-occupied housing. Of the proposed 155-units, 77 units would be condominium ownership and the remaining 78 would be rental units. Thus, the proposed development may potentially increase population by 425 persons.

Based on a factor of six pounds of solid waste per person per day, and the projected 425 persons, the proposed project may potentially generate 38.8 tons of solid waste per month. Please confirm that the projected solid waste can be accommodated by your facilities. Also, please provide information on the location of the transfer station to be used and/or the ultimate disposal location.

Thank you in advance for your assistance in this matter. Please feel free to contact the undersigned with any questions you may have concerning this request.

Sincerely,

Jim Morgo
President

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

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Counsel

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November 4, 2003

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. James Madsen, Manager
KeySpan Corporation
Gas Sales and Marketing
175 East Old Country Rd.
Hicksville, NY 11801

Re: Service Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear Mr. Madsen:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington.

The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units. In addition, the proposed development would include a playground/recreation area, an on-site community center building, day care center, a manager's apartment, an on-site sewage treatment system and a recharge basin.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, including utilities, and I would appreciate your assistance in this regard. Please advise on the availability of natural gas in the location of the proposed development and if natural gas services could be provided.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,

Jim Morgo
President

Cc: Robert Catel
David Manning
Tom DeJesu
Vinnie Frigeria

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

LONG ISLAND HOUSING PARTNERSHIP, INC. AND AFFILIATES

A Private Not-for-Profit Developer, Sponsor and Facilitator of Affordable Homes

November 10, 2003

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Howard Gross
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VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Chairman Richard Kessel
LIPA Executive Offices
333 Earle Ovington Boulevard
Suite 403
Uniondale, New York 11553

Re: Service Availability Request
Proposed 155-Unit Housing Development (Matinecock Court)

Dear ~~Chairman Kessel~~ Richie:

The Long Island Housing Partnership, Inc. is serving as development consultant to Housing Help, Inc., which is proposing the construction of a 155-unit housing development on a 14.574-acre parcel located on the northwest corner of Elwood Road (CR 10) and Pulaski Road (CR 11) in the hamlet of East Northport, Town of Huntington. The Long Island Railroad borders the site to the northwest, and a LIPA substation is situated to the north.

The proposed project consists of a 155-unit housing development, which includes 20 one-bedroom units, 90 two-bedroom units, 37 three-bedroom units and 8 four-bedroom units. In addition, the proposed development would include a playground/recreation area, an on-site clubhouse, an on-site sewage treatment system and a recharge basin.

Please note that a Draft Environmental Impact Statement (DEIS) is currently being prepared to evaluate the potential impacts of the proposed action. As part of the State Environmental Quality Review Act (SEQRA) process, the DEIS is to include information on public services, including the availability of utilities, and I would appreciate your assistance in this regard. According to the project engineer, the projected electrical load for the proposed development is as follows:

- 100± amps per dwelling unit;
- 300± amps for the clubhouse; and
- 200± amps for the sewage treatment system.

Note that the project engineer has not yet estimated the projected electrical load for on-site lighting. Regardless of same, please advise if the projected electricity needs can be accommodated by LIPA.

Thank you for your assistance in this matter. Please feel free to contact me at (631) 435-4710 if you should have any questions concerning this request.

Sincerely,

Jim Morgo
President

JM:jp
Cc: Bill Davidson

180 Oser Avenue, Suite 800
Hauppauge, Long Island, N.Y. 11788
Tel: (631) 435-4710 • Fax: (631) 435-4751

EQUAL HOUSING OPPORTUNITY

APPENDIX I

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643

Bernadette Castro
Commissioner

February 22, 1996

Susan Lagville
Housing Help, Inc.
91-101 Broadway, Suite 6
Greenlawn, New York 11740

Dear Ms. Lagville:

Re: DHCR
Proposed Matinecock Court
Corner of Elwood & Pulaski Roads
Greenlawn
Town of Huntington, Suffolk County
96PR0323

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed this project in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Based on information in our files and your submission, it appears there are no properties, including archeological sites, within or adjacent to the project area which meet the criteria for listing on the State or National Registers of Historic Places.

It is therefore the opinion of the OPRHP that this project will have No Impact on historic properties.

If you have any questions, please call me at (518) 237-8643, extension 283. When responding please refer to the Project Review (PR) number noted above.

Sincerely,

John Auwaerter
Historic Preservation
Program Analyst

cc: John Farndell, DHCR

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APPENDIX J

MATINECOCK COURT
GREENLAWN, NEW YORK

SEWAGE TREATMENT PLANT
ENGINEERING REPORT

PREPARED FOR
HOUSING HELP INC.

Michael P. Chiarelli Engineer, P.C.
1954 New York Avenue
Huntington Station, New York 11746-2906
Tel: (631) 673-3808 Fax: (631) 673-3842

MAY 2004

MATINECOCK COURT
GREENLAWN, NEW YORK

SEWAGE TREATMENT PLANT
ENGINEERING REPORT

PREPARED FOR
HOUSING HELP INC.

STATE OF NEW YORK
MICHAEL P. CHIARELLI
No. 53610
LICENSED PROFESSIONAL ENGINEER
2/10/04

Michael P. Chiarelli Engineer, P.C.
1954 New York Avenue
Huntington Station, New York 11746-2906
Tel: (631) 673-3808 Fax: (631) 673-3842

MAY 2004

FORWARD

This Engineering report has been prepared in compliance with the requirements of *Appendix B - Standards for Approval and Construction of Sewage Collection Systems and Treatment Works* (issued by Suffolk County Department of Health Services (SCDHS)) and in general follows the outline of Chapter 10 of the *Recommended Standards for Wastewater Facilities* (Ten State Standards).

This Engineering Report has been prepared to address the design for the Sewage Treatment Plant (STP) serving the Matinecock Court residential development.

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DRAWINGS

DRAWING NO. 1 - SANITARY SITE PLAN

DRAWING NO. 2 - HYDRAULIC PROFILE

DRAWING NO. 3 - FLOOR PLAN

(All Drawings are located at the end of this document.)

SECTION I

GENERAL INFORMATION

Project Name:	Matinecock Court
Applicant:	Housing Help Inc.
Project Description:	The applicant proposes to construct a housing facility consisting of 77 condominiums, 78 apartments and a community center.
Project Location:	The development will be located in the Greenlawn, Town of Huntington. The site area for the project is 14.574 acres. Refer to Drawing 1- Sanitary Site Plan.
Consulting Engineer:	Michael P Chiarelli Engineer, P. C. 1954 New York Avenue Huntington Station, N.Y. 11746-2906 Tel.: (631) 673 – 3808 Fax: (631) 673 – 3842

SECTION II

INTRODUCTION

General

This Engineering Report has been prepared for the Matinecock Court residential development. The project site is located northwest of the intersection of Pulaski Road and Elwood Road, in the Greenlawn, Town of Huntington, New York. The development will consist of 77 condominiums, 78 apartments and a community center.

The project site is a 14.574-acre parcel located in SCDHS designated groundwater management Zone I. In this zone, the maximum allowable sewage flow is 600 gallons per acre per day without an STP. The projected 36,000 gallons per day (gpd) design flow on a 14.574-acre parcel exceeds the 8,744 gpd (14.574 x 600) limit; therefore, formal sewage treatment including nitrogen removal will be required.

Project Site

The project site is zoned R-3M Multi Family.

The topography of the site can be characterized as gently sloping from the property line towards the center of the property. The STP will be located on the northwestern portion of the property as shown on the Sanitary Site Plan.

The location of the proposed STP does not meet all the SCDHS regulations for separation distance for an enclosed STP. An application has been made to the SCDHS Board of Review for a variance from the separation distance requirements.

There is one Suffolk County Water Authority (SCWA) public water supply well within 1,500 ft. of the project site. The nearest public water supply well is the Laurel Hill Road well field and pump station located 1,200 ft.± northwest of the project site.

The groundwater flow direction in the area is generally to the north based on Water Contour Maps, SCDHS, 1999. Groundwater elevation in the vicinity is 50 ± feet above MSL.

SCWA Public water mains serve the area. One (1) 12" water main is adjacent to the site on Elwood Road.

A hydrogeological consultant, Camp, Dresser and McKee (CDM) was engaged to examine the impact of a recharge of 36,000 gpd of treated effluent on the Laurel Hill Road well field and pump station. Using computer models of the ground water flow in the area it was determined by CDM that the proposed location of the effluent recharge field in the northwest portion of the property is outside of the well field's contributing area and therefore will have minimal impact on the Laurel Hill well field and pump station. CDM's report is attached to this report as Appendix C.

SECTION III

PROPOSED STP CAPACITY

Sanitary Sewage Flow

The average daily design flow is the average of the daily volumes of sewage to be received at the STP for a continuous twelve (12) month period. The average daily design flow for the proposed STP is derived as follows:

A. Proposed Development

1.	Four (4) condominiums (larger than 1,200 sq. ft.) @ 300 gpd/unit	=	1,200 gpd
2.	Seventy three (73) condominiums (600 -1,200 sq. ft.) @ 225 gpd/unit	=	16,425 gpd
3.	Four (4) apartments (larger than1,200 sq. ft.) @ 300 gpd/unit	=	1,200 gpd
4.	Seventy four (74) apartments (600 – 1,200 sq. ft.) @ 225 gpd/unit	=	16,650 gpd
5.	5,164 sq. ft. Community Center@ 0.03 gpd/sq. ft	=	155 gpd
	Total Projected Sewage Flow	=	35,630 gpd
	Sewage Treatment Plant Size	=	36,000 gpd

The basis of design for the proposed STP is 36,000-gpd and all calculations in this report represent a STP of 36,000 gpd capacity.

Peak Sanitary Flow

In accordance with "Figure 1" of the Ten State Standards, the peak hourly flow for a population of approximately 480 (36,000 gpd ÷ 75 gpd per person) is 4.0. Peak hourly flow is therefore calculated to be 36,000 gpd x 4 = 144,000 gpd (100 gpm).

SECTION IV

INFLUENT SEWAGE CHARACTERISTICS

The influent raw sewage characteristics used for the purpose of designing the proposed upgrade are as follows and are as required by SCDHS:

BOD_5:	272 mg/l
SS:	300 mg/l
TKN:	65 mg/l
Alkalinity:	200 mg/l

Based on the above influent sewage characteristics and influent flow of 36,000 gallons per day, the influent loads are expected to be as follows:

Lbs. of pollutants = mg/ l pollutant x 8.34 lb./gal. x flow in MGD

BOD_5: 272 mg/l x 8.34 lb./gal. x 36,000 gpd x 10^{-6} = 81.67 lb. BOD_5/day

SS: 300 mg/l x 8.34 lb./gal. x 36,000 gpd x 10^{-6} = 90.07 lb. S.S./day

TKN: 65 mg/l x 8.34 lb./gal. x 36,000 gpd x 10^{-6} = 19.52 lb. TKN/day

ALK: 200 mg/l x 8.34 lb./gal. x 36,000 gpd x 10^{-6} = 60.05 lb. Alk./day

SECTION V

EFFLUENT REQUIREMENTS

The treated effluent from the proposed STP will be recharged to the ground via leaching pools. Consequently, we expect the State Pollutant Discharge Elimination System (SPDES) permit will require a daily maximum total nitrogen concentration of 10 mg/l as the limiting value and a pH limit of 5.5 to 8.5 SU. The 30-day arithmetic average flow limit will be the design flow of 36,000 gpd.

Based on the selected treatment process, the following effluent quality is anticipated:

BOD_5	< 10 mg/l
TSS	< 10 mg/l
Total N	< 10 mg/l
NH_3-N	< 2 mg/L
pH	5.5 to 8.5 SU

The effluent quality from the proposed STP is expected to meet the effluent requirements of SPDES permit.

SECTION VI

TREATMENT OPTIONS

Based on density restrictions, formal sewage treatment for the nitrogen removal must be provided for the proposed project. Generally, two options are available:

- Off-Site Treatment and
- On-Site Treatment.

A. Off-Site Treatment

Off-site treatment requires that there be an existing STP which:

- is sufficiently close to the project site to allow for economical transfer of sanitary sewage flow from the project site to the STP site;
- has sufficient uncommitted excess capacity for the expected, proposed and future sanitary sewage flow; and
- is capable of treating the sewage to the required effluent quality.

In addition to above requirements, there must be a willingness of the owner of host STP to enter into an agreement with the proposed project owner to accept and treat sewage generated by proposed project at host STP.

The following two (2) STPs were investigated for the possibility of receiving sanitary flows generated at the Matinecock Court residential development.

No.	Name	Permitted Flow	Distance to Project Site	SPDES Permit No.
1	Paumanack Village STP	42,700 GPD	5,250 Ft. ±	NY 0137065
2	Northport Veteran Hospital STP	340,000 GPD	10,000 Ft. ±	NY 0024881

Review of the Paumanack Village indicates that it does not have enough capacity to receive an additional 36,000-gpd flow. Analysis of delivering sewage flow to Northport Veterans Hospital STP indicates that it is not economically viable because of the length of a force main and the cost of crossing of rail road tracks. Therefore, the off-site treatment option is not an option.

B. On-Site Treatment

An STP may be constructed on-site. Many treatment plants have been constructed in Suffolk County using the extended aeration process followed by a deep bed denitrification filter. Some treatment plants use rotating biological contactors (RBCs) followed by a deep bed denitrification filter. Other STPs use Sequencing Batch Reactors (SBR).

The Biologically Engineered Single Sludge Treatment (BESST) process was selected for this project because of its process stability, its small footprint and ability to constantly achieve design goals.

C. Description of Selected BESST Treatment Process:

The BESST Process is a continuous flow modified extended aeration process. Sewage enters first into the anoxic chamber where it mixes with return activated sludge (RAS) from the clarifier. The nitrogen removal process is completed here as nitrite (NO_2-N) and Nitrate (NO_3-N) produced in the aeration zone are converted to Nitrogen gas (N_2). Some of the influent BOD_5 is consumed in this denitrification process. The dissolved oxygen (DO) level is maintained below 0.2 mg/l, and submerged mixers keep MLSS in suspension.

The mixed liquor is transferred by gravity from the anoxic chamber to the far end of the aeration chamber through a submerged transfer pipe. BOD_5 removal and nitrification take place here as the mixed liquor is aerated by fine bubble air diffusers. The aerated mixed liquor then flows into the bottom of the clarifier by means of a uniquely designed baffle.

In the clarifier solids settle to the bottom as the supernatant flows over the overflow weir and is gravity fed to the micro screen drum filter. Unfiltered sludge and backwash waste are returned to the sludge holding tank. Clean filtered effluent is transferred to the effluent chamber before flowing over the effluent weir and exiting the STP, where it flows by gravity to the effluent leaching pools.

SECTION VII

TREATMENT FACILITY DESIGN

Drawing No. 1 – SANITARY SITE PLAN, illustrates the proposed site development and the location of the sewage treatment and disposal facilities. Drawing No. 2 – HYDRAULIC PROFILE illustrates the sewage treatment hydraulic profile. Drawing No. 3 – FLOOR PLAN illustrates the STP floor plan.

The BESST process is a continuous flow process. The sewage treatment and disposal facilities will include a control system, an influent pump station, a fine screen, an equalization tanks, process tanks consisting of aerobic and anoxic compartments, an up flow sludge blanket filtration (USBF) clarifier, a micro screen drum filter, sludge storage tanks and sub surface effluent recharge pools. Each of these and the support systems are described below.

Influent Pump Station

The influent pump station will be equipped with two (2) Flygt Model FP 3085 raw sewage submersible cutter pumps. Each pump will pump 124 gpm at 33.3 ft. TDH that is in excess of peak hourly flow as required by paragraph 42.38 of the Ten State Standards. The peak hourly flow rate, calculated in the proposed STP capacity section of this report, is 100 gpm for proposed daily average flow of 36,000 gpd. The minimum wet well volume required for this flow is calculated as follows:

$V = \frac{\theta q}{4}$, where

V = Effective Volume

θ = 15 min. (1 start every 15 minutes)

q = Pump Capacity, 124 gpm

$V = \frac{15\,(124)}{4} = 465$ gallons (62.17 cu. ft.)

Provide a minimum volume of 465 gallons (62.17 cu. ft.) for the wet well. This minimum volume is measured from the both pumps "off" elevation to the lead pump "on" elevation.

The both pumps off elevation will be above the top of the pump.

The pump station will be designed to meet all applicable criteria of Chapter 40 "Wastewater Pumping Stations", of the Ten State Standards including general criteria and the special considerations for submersible pump stations. The station will be an eight-feet inside diameter reinforced concrete structure, with dual hatches at grade for access with a safety climb and "ladder up" post. Ventilation and lighting will be provided as per Suffolk county Department of Public Works (SCDPW) requirements.

Screening

The influent sewage pumps will elevate the sewage to a fine screen which will be mounted above one of the sludge holding tanks. The fine screen will have a capacity to pass 330 gpm of clean water. The screened solids will drop into the sludge holding tank while the fine screen effluent will be conveyed by gravity to the equalization tank. A hot water spray nozzle will be provided for cleaning the screen.

Equalization Tank

The equalization tank will be constructed with two (2) compartments, each with 6'-9"x 12'-0" x 9'-6" effective depth. Total equalization volume will be 11,512 gallons. This volume will be sufficient to hold 20% of average daily flow (0.20 x 36,000 gpd = 7,200 gallons) plus a consideration for 25% of the sludge holding tanks volume (0.25 x 12,723 gallons = 3,181 gallons) as return sludge supernatant flow.

The equalization compartments will be equipped with interconnecting piping with a plug valve to allow for operation of both tanks under normal circumstances and isolation of either of the tanks to allow for cleaning and repairs.

Each compartment will be provided with one (1) Flygt Model CP-3085 submersible pump with a capacity of 140 gpm at 22.80 ft. TDH to elevate the screened sewage to a constant head box, where the forward flow to the process tanks can be controlled on a 24 hour basis and excess flow returned to the equalization tank.

An aeration system will be installed in each compartment. Each system will include diffusers, piping and valves. Minimum air volume required to be supplied to the equalization tanks will be 40.50 SCFM (2 TANKS X 3.0 SCFM/L.F. X 6.75 ft L).

Three (3) blowers with minimum capacity of 55 SCFM will be provided. One (1) blower will supply air to the equalization tanks, one (1) blower will supply air to the sludge holding tanks, and one (1) blower will function as a standby unit.

Process Tanks

Two treatment process tanks will be provided. Each tank is comprised of an anoxic compartment and an aerobic compartment which are separated by the clarifier.

Anoxic Compartment - The screened sewage enters the anoxic compartment where it mixes with the return activated sludge (RAS) from the bottom of the clarifier by means of air lift pumps. This compartment acts as a selector conditioning zone for the micro organisms which consume the pollutants in the sewage. Some of the influent BOD_5 is consumed by the nitrifying bacteria as they complete the nitrogen removal process (denitrification) and convert nitrate (NO_3) to nitrogen gas (N_2). Two submersible mixers supported on guide rails and a manual hoist will be provided to prevent settling. The mixed liquor then flows into the far end of the bottom of the aeration compartment through a submerged transfer pipe.

The volume of each anoxic zone is 9,600 gallons (1,283.4 cu.ft.). With the design flow of 36,000 GPD detention time will be 12.80 hours.

Aeration Compartment -The mixed liquor is aerated by a fine bubble air diffusion system which also prevents solids settlement. The remaining BOD_5 is removed and the nitrification process begins as ammonia (NH_3) is converted to nitrate (NO_2) and nitrate (NO_3). The mixed liquor then flows into the bottom of the clarifier by means of a unique baffle design in the clarifier. Returned sludge is recirculated to the anoxic zone by means of Air Lift Pumps.

The aeration compartment volume in each tank is 13,541 gallons (1,810 cu.ft.). With the design flow of 36,000 GPD detention time will be 18.05 hours. Combine detention time for anoxic zone and aeration zone will be 30.85 hrs.

Clarifier

The USBF clarifier has a unique triangular cross-section. Mixed liquor enters the clarifier through the unique baffle design at the bottom of the clarifier and flows upward. As the mixed liquor rises, heavier solids settle out and, in effect, form a filter which filters out colloids and very fine particles. A distinct interface forms between the supernatant and the sludge blanket. An air lift pump draws the activated sludge from the bottom of the clarifier and either discharges it to the anoxic chamber or to the sludge storage tank. Nitrified RAS is recycled to the anoxic chamber to maintain the biomass concentration required for the treatment process. The recycle rate is proposed to be 4.6 times the design flow rate for the plant. Periodically, waste activated sludge (WAS) is pumped to the sludge storage tanks to control the solids retention time (SRT) of the biomass. The design SRT is 29.2 days. An air lift skimmer skims floatables such as light plastics, fats and oils from the surface of the clarifier. The clarifier supernatant flows over the weir into a trough and into the micro screen drum filter. The clarifier volume is 3,423 gallons

(457.6 cu.ft.). Detention time in the clarifiers at average flow of 36,000 GPD will be 4.56 hrs, Surface loading rate will be 218 GPD/Sq.Ft. and weir loading rate will be 2,000 GPD/Ft.

Micro Screen Drum Filter

The micro screen drum filter consists of a high pressure backwash rinsing system, a micro screen drive mechanism, a 20 micron filter cloth and drum, a solids removal system and an overflow weir. The filter's capacity is 0-120,000 gpd based on an influent load of 30 mg/l TSS. Clarified effluent flows into the interior of the filter. Solids greater than 20 microns are trapped on the filter cloth while the filtered water passes through the filter cloth and into the effluent storage tank. As solids build up on the inner side of the filter cloth, the water level within the filter rises and the level control probe activates the rotating drum and the jet rinse system. As the drum rotates, jet streams of filtered water wash the accumulated solids from the inner side of the filter cloth into the waste trough located in the inner drum, then into the silt sump. A silt pump pumps the accumulated solids from the sump to the sludge holding tanks. The rotating drum returns the filter cloth to the bottom of the filter. The water level drops and the probe switches off the rotating drum.

Effluent Flow Meter:

A 60° V-notch and an Ultrasonic Flow Meter will be provided in the effluent chamber of the STP. The instrumentation will provide a visual readout of instantaneous flow, a flow totalizer and a flow recorder. This instrumentation will be located in a dry location in the treatment plant building.

Effluent Recharge

The following calculations illustrates the sizing of the effluent recharge system:

- Average Daily Flow - 36,000 gpd
- Loading Rate - 10 gpd/sq. ft.

- Required Leaching Area $= \frac{36{,}000 \text{ gpd}}{10 \text{ gpd/sq. ft.}} = 3{,}600$ sq. ft.
- Area of Leaching/Ft. Depth of 10' Diameter Pool
  3.14 x 10 ft. dia. x 1 ft. depth = 31.4 sq. ft.
- Required number of Leaching Pools
  With 16' effective depth $= \frac{3{,}600 \text{ sq. ft.}}{31.4 \text{ sq. ft. / ft.} \times 16 \text{ ft.}}$

  = 7.16pools

Install 100% of future leaching pools at initial construction.

The recharge system will therefore consist of 3 clusters of 5 pools each. Each cluster will consist of one (1) distribution pool and four (4) leaching pools to accommodate present and 100% expansion leaching pools. And an additional 100% expansion area will be provided for future leaching pools as required by SCDPW.

Sludge Storage

The sludge holding tank sizing is based on an equivalent sewage flow of 75 gpd per capita and 3 cubic feet of sludge per capita per month. For the equivalent population of 480 people (36,000 gpd ÷ 75 gpd/capita), the required tank volume is 1,440 cubic feet. The sludge holding tank will be constructed in two (2) compartments, each with 6'-9" x 12'-0" x 10'-6" effective depth. This will provide 1,701 cu. ft. (12,723 gallons) of sludge storage or approximately 35½ days of storage capacity.

Air will be supplied to the sludge holding tank at a rate of 30 cfm per 1000 cu. ft. of tank volume to keep the contents aerobic to avoid septic odors and maintain the contents of the sludge holding tanks in a completely mixed condition. Consequently, the air supply rate will be as follows:

CFM = 1,701.00 cu. ft. x 30 SCFM/1000 cu. ft.

= 51.03 SCFM

SAY 55 SCFM

Sludge and scum removal will be via scavenger truck to an approved off-site treatment facility.

Alkalinity Supplement

Alkalinity is consumed in the nitrification process, and produced in the denitrification process. Alkalinity consumption exceeds alkalinity production; therefore, if sufficient alkalinity is not available in the influent sewage flow, the pH of the sewage will drop during the sewage treatment process and inhibit the nitrification and denitrification processes.

The design value for the raw sewage total nitrogen is 65 mg/l, all assumed to be in the organic and ammonia form, with no nitrite or nitrate. It is assumed that all influent BOD_5 is removed (272 mg/l), utilizing ammonia-nitrogen for cell synthesis at the rate of 1 mg ammonia-nitrogen per 20 mg BOD_5 (a rate of 5%)[1]. The effluent is assumed to contain 3mg/l organic nitrogen, 1 mg/l ammonia nitrogen, plus 6 mg/l nitrate nitrogen, and no nitrite nitrogen.

Conversion from ammonia to nitrate (nitrification) consumes 7.2mg alkalinity (as $CaCO_3$) for each mg of ammonia-nitrogen converted.[1] Conversion of nitrate to nitrogen gas (denitrification) produces 3mg alkalinity for each mg of nitrate-nitrogen converted.[1]

Influent nitrogen converted to nitrate is as follows:

65 mg/l influent N - 5% x 272 mg/l synthesis - 3 mg/l effluent organic N - 1 mg/l effluent ammonia N = 47.40 mg/l as N

Alkalinity consumed in nitrification is:

47.40 mg/l N x 7.2 mg/l alkalinity per mg/l N = 341.28 mg/l as $CaCO_3$

Nitrate converted to nitrogen gas is as follows:

47.40mg/l NO_3 - N - 6 mg/l NO_3 - N in effluent = 41.40 mg/l as N

Alkalinity produced in denitrification is:

41.40 mg/l N x 3 mg/l alkalinity per mg/l as $CaCO_3$ = 124.20 mg/l as N

---

[1] "Phosphorus and Nitrogen Removal from Municipal Wastewater" Soap and Detergent Association Seminar Publication 1991, Page 7 and Page 51.

As shown above, a net alkalinity consumption of 217.08 mg/l (341.28 mg/l consumed – 124.20 mg/l produced) as $CaCO_3$ will occur. Assuming it is desired to maintain 50mg/l alkalinity in the effluent as a buffer, 150 mg/l (200 mg/l influent - 50 mg/l effluent) of alkalinity is available from the raw sewage. Supplemental alkalinity required will be 67.08 mg/l as $CaCO_3$ (217.08 mg/l net consumption - 150 mg/l available).

67.08 mg/l of alkalinity as $CaCO_3$ ($CaCO_3$ has a molecular weight of 100 and a dissociated valence of two) is equivalent to 54 mg/l of alkalinity as NaOH (NaOH has a molecular weight of 40 and a dissociated valence of one):

$$67.08 \text{ mg/l} \times \frac{40}{100} \times \frac{2}{1} = 53.66 \text{ mg/l NaOH, say 54 mg/l}$$

The daily sodium hydroxide feed rate is calculated as follows:

54 mg/l NaOH feed rate x 0.036 MGD x 8.34 = 16.21 lb NaOH/day

16.21 lb. /day ÷ 25% NaOH solution strength = 64.84 lb. solution/day

64.84 lb. solution/day ÷ (8.34 lb. /gal x 1.278 spec. gravity.)

= 6.08 gal. Solution /day

A sodium hydroxide feeder will be provided, sized to feed the above volume of solution per day. Space will be provided for storage of two (2) 55 gallons drums of sodium hydroxide solution (25%) in the control room area.

STP Building

A masonry structure will be built around the entire STP. It will be designed to blend with the architecture of the development. This structure will provide:

- Security to keep unauthorized personnel out of the process and equipment areas;
- Protection of the treatment process and process equipment from the elements (cold weather, rain, frost);

- A dry, heated area for treatment personnel for operation and maintenance functions, process testing and record-keeping; and
- A means to contain noise from process equipment.

The STP building will be heated and ventilated as appropriate for the various process and control areas. Sufficient lighting for safe working conditions will be provided. Safe means of egress will be provided per local codes.

The control area of the STP building will house the blowers, a room for the standby generator and electrical panels and a laboratory with toilet/washroom facilities. Space will be set aside in the control area for sodium hydroxide storage and feed equipment.

The laboratory will provide space to store instruments and test kits for process monitoring. The instruments and test kits to be provided will include:

- Portable dissolved oxygen meter
- pH meter
- Temperature meter or thermometer
- 1 liter graduated cylinders for settleability tests
- ammonia field test kit
- Nitrite field test kit
- Nitrate field test kit

This area will also provide storage space for tools, spare parts and lubricants, and space for the operator for maintaining logs and various treatment plant records. Spare parts and lubricants will be provided as part of the facility construction. Required logs and records will be discussed in detail in the facility Operation and Maintenance Manual to be prepared by the Engineer of Record during the construction period.

The laboratory will provide comfortable working conditions for process testing and record keeping work, and will be equipped with electric outlets for the laboratory equipment. Lighting will be in accordance with Appendix B of the SCDHS standards for STPs. A laboratory bench, shelving, drawer space, filing space, laboratory sink, etc. will be provided.

Deluge shower and eyewash facilities, safety signs, etc. will be provided for personnel safety in the sodium hydroxide storage and feed area.

Miscellaneous Facility Design Features

Separation Distances - Appendix B of the SCDHS Standards for STPs requires 150 ft. minimum separation distance between the treatment building and property lines, and 200 ft. from structures or setbacks. As illustrated on Drawing No. - 1, SANITARY SITE PLAN, the location of the STP will not meet the requirements of property setback distances. Appendix B also requires 25 ft. minimum separation distance between the leaching pools/recharge area and property lines or structures; these distances will be met.

Based on a site investigation, there are no surface fresh water bodies, freshwater wetlands or tidal wetlands within 300 feet of the proposed treatment plant site.

Observation Wells - Appendix F of the SCDHS standard provides guidelines for the design and installation of groundwater monitoring wells for STPs. The 1999 SCDHS Water Contour Map indicates that groundwater movement in the project vicinity is generally north. One observation well will be

situated up gradient and two wells will be situated down gradient of the effluent leaching pools, to allow for monitoring the impact of the effluent on the groundwater quality. The well design will be in accordance with the requirements of Appendix F. Exact monitoring well locations will be selected during detailed facility design, subject to SCDHS approval.

Expansion Area - As illustrated on Drawing No. - 1 SANITARY SITE PLAN, there is sufficient on-site area dedicated for 100% expansion of the STP, the subsurface effluent recharge facilities will consist of 200 % capacity and space for additional 100% expansion area will be dedicated for the proposed development.

Water Supply- The SCWA will supply water for the proposed development of the site. Water for the STP will be tapped from the service to the site. A reduced pressure backflow preventer will be provided on the water supply into the treatment plant to protect the community water supply from possible contamination.

Ventilation - Ventilation will be provided to maintain a dry, comfortable condition inside the building. The number of air changes per hour will be in accordance with the Ten State Standards where applicable and with good engineering practice for other treatment plant areas.

Color Coding- Process piping will be color coded and identified in accordance with the uniform requirements of Appendix B of the SCDHS Standards:

SERVICE	COLOR	LETTERING
Sewage	Gray	S
Sludge	Brown	SL
Air	Green	A
Sodium Hydroxide	Orange	Na
Potable Water	Blue	C.W.

Other services, if provided, will be color coded and identified as required by Appendix B of the SCDHS standards.

Safety - The STP will be designed with personnel and equipment safety in mind and in accordance with good practice and Ten State Standards Subchapter 57, "Safety." Handrails and gratings will be provided where needed. Equipment will be provided as appropriate for the treatment processes, laboratory testing and plant chemicals. Appropriate warning signs and required motor lockouts will also be included. Equipment and personnel safety will be covered in greater detail in the facility Operation and Maintenance Manual.

Testing - The construction design documents will contain provisions for structure, piping and equipment testing in accordance with Appendix B of the SCDHS Standards. This will include structure water tightness testing, piping pressure testing including blow-out of air piping, and operational testing of equipment (including pumps, blowers, controls, alarms).

Certifications- Manufacturer certification of successful equipment testing and Engineer of Record certification of installation and testing will be provided in accordance with the provisions of Appendices B and C of the SCDHS Standards.

Sampling Locations - Samples are to be taken at the plant influent, clarifier effluent and at the plant effluent after the filter units. A sketch showing the process sample locations is included as Appendix B; the sketch is drawn on SPDES permit page 4 of 9.

APPENDIX A

MANUFACTURER'S PROCESS CALCULATIONS

BESST PROGRAM AND FORMULA LISTING

The following variable and formula lists represent the program listing for the computer model used to design and size the BESST system. Not all of the formulas are listed due to copyright and patent protection. Formulas that are NOT shown are mainly sub-formulas of those listed. For formula verification see Metcalf & Eddy: Wastewater Engineering; and K.R. Imhoff : Taschenbuch der Stadtenwasterung. 28. Auflage, Oldenbourg, Munchen - Wien 1993.

INPUT VALUES

1.	B	**Sludge Load (kg BOD/kg VSS)**		**0.03 to 0.20**
2.	N_X	**Flux flow (kg ds/m^2/h)** function of temperature (use @ 20 deg C)		**6.00**
3.	v_l	**Limit hydraulic loading (m/h)**		**0.99 to 1.1**
4.	V_X	**Sludge Volume (ml/l)**		**4.0 to 0.7**
5.	KI	**Sludge Index (ml/g)**		**70 to 120**
6.	p	**Volatile Suspended Solids (%)**		**0.62 to 0.68**
7.	Y	**Maximum Yield Coefficient (kg VSS/kg BOD)**		**0.53 to 0.6**
8.	k_{ac}	**Decay Rate (d)**	constant	**0.09**
9.	Q	**Flow Rate (m^3/d)**		
10.	Q_Q	**Flow Variation**		**1.5 to 3**
11.	S_O	**Influent BOD (kg/m^3)**		
12.	S_T	**Effluent BOD (kg/m^3)**		
13.	N_O	**Influent Ammonia (kg/m^3)**		
14.	N	**Effluent Ammonia (kg/m^3)**	typically	**0.005**

BESST PROGRAM AND FORMULA LISTING CONTINUED

15.	N_3	**Effluent Nitrates N-NO_3 (kg/m^3)**	typically	**0.001 to 0.015**
16.	NL_O	**Influent TSS (kg/m^3)**		
17.	NL	**Effluent TSS (kg/m^3)**		
18.	min	**Minimum water temperature (^oC)**		
19.	max	**Maximum water temperature (^oC)**		
20.	a	**Oxygen Transfer Coefficient (g/Nm^3)**		**15 to 50**
21.	SV	**Ratio of Separation Surface to Separation Volume**		
23.	m_i	**Specific growth rate of nitrificants**	constant	**1.37**
24.	pH	**pH**		**6.0 to 8.0**
25.	m_{id}	**Specific growth rate of denitrificants**		**0.1 to 0.3**
26.	Ok	**Peak load of aeration**	constant	**1.3**

PES PROJECT #062403/JW1 Date: July 3, 2003
JOB NAME: MATINECOCK STP – NEW YORK
ONE (1) 36,000 GPD BESST PLANT

BESST DESIGN CALCULATIONS

1) **B_X** Actual Sludge Load [kg BOD_5/kg VSS/d]

$$B_x = B \times 1.02^{(tmin - 20)}$$
$$B_x = .120 \times 1.02^{(10-20)}$$
$$B_x = 0.098442 \text{ kg } BOD_5/\text{kg VSS}$$

2) **A** Sludge Age [days]

$$A = (1/(YB_x))(1 - 0.5((YB_x)/k_{ac}) + (SQRT(1+ ((YB_x)/2k_{ac})^2))$$
$$A = (1/(.6)(0.098442))(1 - 0.5((.6)(0.098442)/.090) + (SQRT(1 + ((.6)(0.098442)/2(.090))^2))$$
$$A = 29.1936 \text{ days}$$

3) **k_d** Actual rate of decay [d^{-1}]

$$k_d = k_{ac}/(1 + Ak_{ac})$$
$$k_d = .090/(1 + (29.1936)(.090)$$
$$k_d = .024811 \text{ } d^{-1}$$

4) **X** Sludge Concentration [kg ss/m^3]

$$X = 1000V_x/KI$$
$$X = 1000(.6)/100$$
$$X = 6.0 \text{ kg ss/m}^3$$

BESST Design Calculations con't

5) **X_v** Volatile suspended solids concentration [kg VSS/m^3]

$X_v = Xp$
$X_v = (6.0)(.65)$
$X_v = 3.9$ kg VSS/m^3

6) **v** Actual hydraulic loading [m/h]

v = lesser of v_l or v_c, where $v_l = 1.0$
$v_c = (N_x/X)e^{0.03(tmin - 20)}$
$v_c = (6.0/6.0)2.7183^{0.03(10 - 20)}$
$v_c = 0.74082$
$v = 0.74082$

7) **V_B** Aeration volume [m^3]

$S_R = S_T - .966pNL = .01 - (.966)(.65)(.01) = .003721$
$V_B = (Q(S_O - S_R))/X_vB_x$
$V_B = (136.2604(.272 - .003721))/(3.9)(.098442)$
$V_B = 95.22\ m^3$

8) **S_S** Clarifier surface area [m^2]

$S_S = ((Q_Q)(Q))/24v$
$S_s = (2)(136.2604)/24(1.0)$
$S_s = 15.33\ m^2$

9) **V_S** Clarifier volume [m^3]

$V_S = S_S/SV$
$V_s = 15.33/0.63$
$V_s = 24.33\ m^3$

BESST Design Calculations con't

10) P_X Net mass of volatile suspended solids produced [kg VSS/d]

$P_X = (Y/(1 + Ak_d))Q(S_O - S_R)$
$P_x = (.6/(1 + (29.1936)(.024811)))(136.2604)(.272 - .003721)$
$P_x = 12.72$ kg VSS/d

11) $\mathbf{P_t}$ Sludge production [kg ss/d]

$P_t = P_X/p$
$P_t = 12.72/.65$
$P_t = 19.57$ kg ss/d

12) $\mathbf{V_N}$ Nitrification Volume [m^3]

$V_N = (Q(N_O - N))/(p_N m_U X_V)$
$V_N = (136.2604(.065 - .002))/(.06288)(0.60854)(3.9)$
$V_N = 57.53\ m^3$

13) $\mathbf{V_D}$ Denitrification volume [m^3]

$V_D = (QN_O Y)/(0.75 m_z X_V)$
$V_D = ((136.2604)(.065)(.6))/((0.75)(.025)(3.9))$
$V_D = 72.67\ m^3$

14) $\mathbf{V_A}$ Volume of aeration [m^3]

V_A = larger of V_{AB} or V_N, where $V_N = 57.53$
$V_{AB} = V_B - V_d((1 + Ak_d)/(2.77(Am_Z)))$
$= 95.22 - 72.67((1 + (29.1936)(.024811))/$
$(2.77(29.1936)(.025)))$
$V_{AB} = 33.23\ m^3$
$V_A = 57.53\ m^3$

BESST Design Calculations con't

15) **V_T** Total volume of reactor [m^3]

$$V_T = V_A + V_D + V_S$$
$$V_T = 57.53 + 72.67 + 24.33$$
$$V_T = 154.53\ m^3$$

16) **O_2** Oxygen consumption [kg O_2/d]

$$O_2 = Q((S_O - S_R)/0.68) - 1.42P_X + 4.57Q(N_O - N)$$
$$O_2 = 136.2604(.272-.003721)/0.68 -1.42(12.72) + 4.57(136.2604)(.065-.002)$$
$$O_2 = 74.93\ kg\ O_2/d$$

17) **Nm** Air consumption [Nm^3/h]

$$Nm = O_2(c_s/(c_s - 2))(o_k/(0.024a))$$
$$\mathbf{Nm} = 74.93(8.1224/(8.1224 - 2))(1.3/0.024(30))$$
$$\mathbf{Nm} = 179.48\ Nm^3/h$$

For formulas see Metcalf & Eddy: Wastewater Engineering; and K.R. Imhoff : Taschenbuch der Stadtenwasterung. 28. Auflage, Oldenbourg, Munchen - Wien 1993.

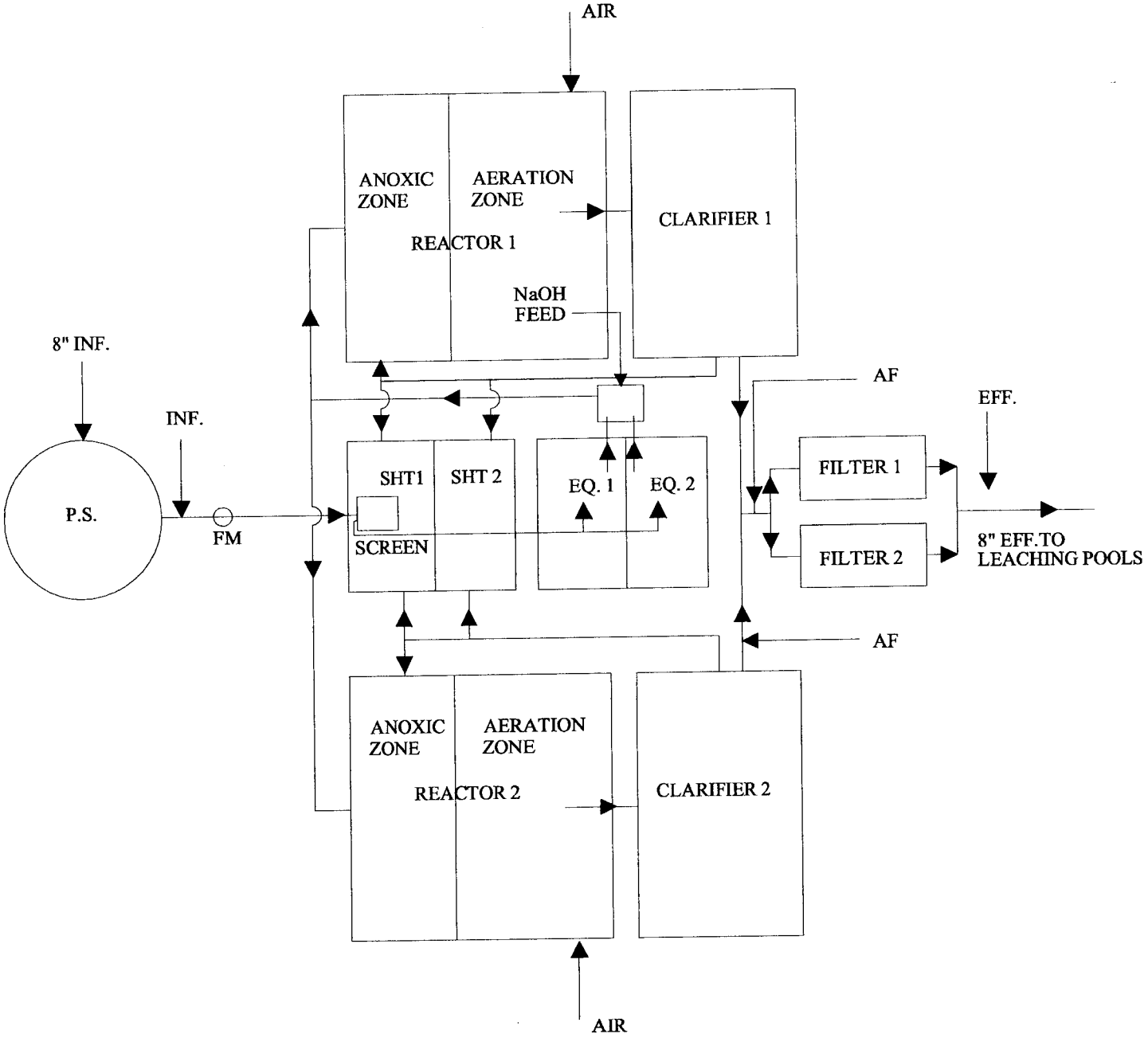
Note: Any mathematical discrepancies are attributed to rounding off. Some variables have been rounded off to shorten the equations.

APPENDIX B

SAMPLING LOCATIONS

PROCESS CONTROL MONITORING LOCATIONS

Permittee shall take samples and measurements to meet the monitoring requirements at the locations indicated below.



PROCESS CONTROL MONITORING LOCATION DESCRIPTION

Influent (INF): Sample taken prior to Reactor
After clarification (AF): Sample taken from Clarifier effluent
Effluent (EFF): Sample taken in Filter effluent chamber

APPENDIX C

HYDROGEOLOGIST REPORT

CDM

RECEIVED
AUG 2003
MICHAEL P. CHIARELLI
ENGINEER, P.C.

Memorandum

To: *Housing Help, Inc., c/o Ms. Susan R. Lagville*

From: *Daniel O'Rourke, Mary Anne Taylor, P.E.*

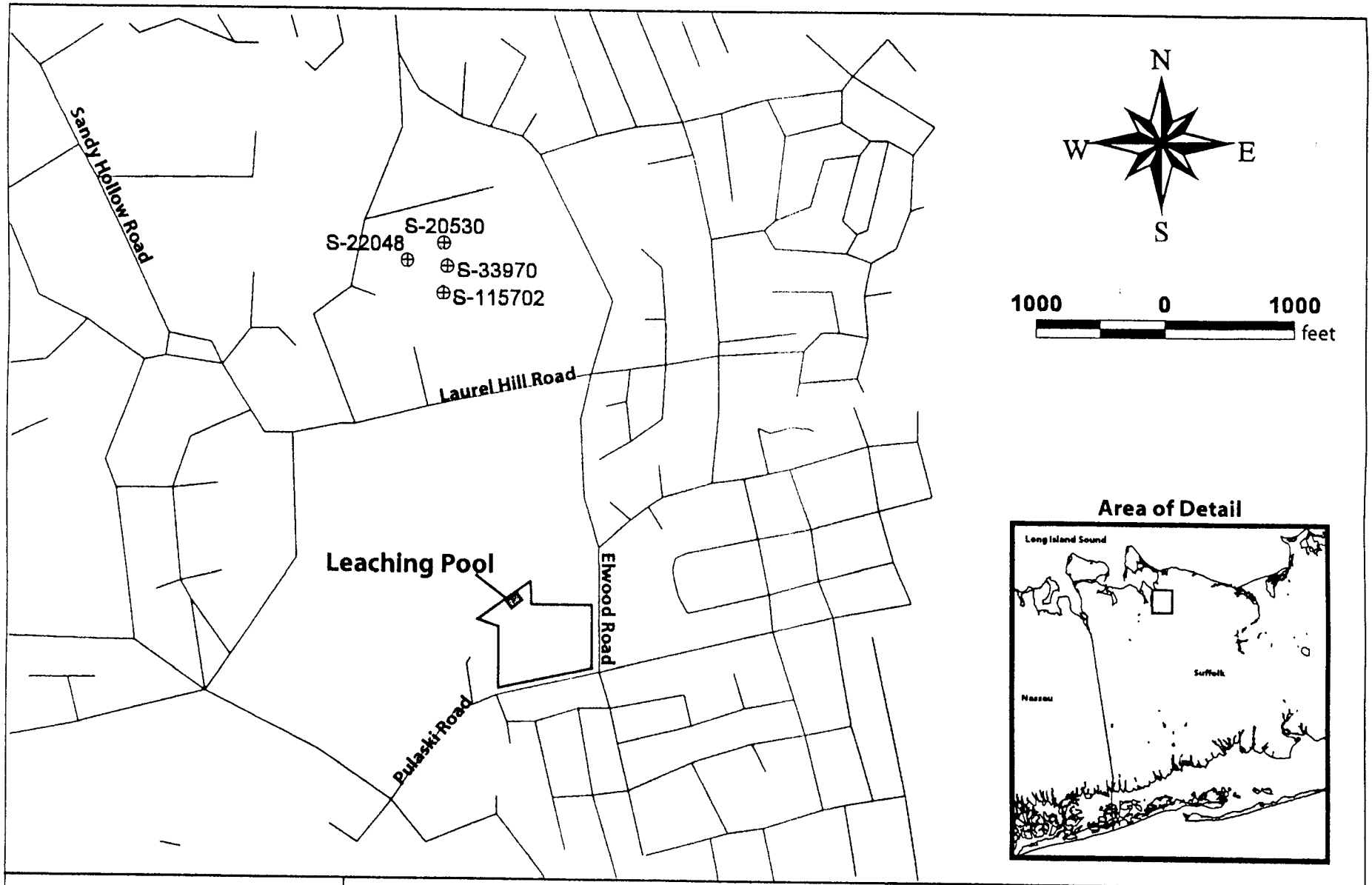
Date: *July 31, 2003*

Subject: *Potential Impact of Treated Sanitary Effluent upon Suffolk County Water Authority's Laurel Hill Road Wellfield*

Introduction

Activities conducted within the area contributing recharge to a public water supply wellfield can have a direct impact on the quality of water withdrawn from the supply wells. The land surface area contributing recharge to a wellfield can be estimated based upon a number of factors, including: well depth, pumping rate, precipitation and recharge rates, aquifer characteristics, water supply pumping at other nearby water supply wells, and hydraulic gradient. This memorandum describes the groundwater flow and contaminant transport modeling conducted to estimate the contributing area for the Suffolk County Water Authority's (SCWA) Laurel Hill Road wellfield in Northport, under projected peak conditions of water supply pumping at the wellfield. The purpose of this project is to determine if the proposed location of a sanitary wastewater effluent recharge area west of Elwood Road and south of the Long Island Rail Road (LIRR) tracks lies within the Laurel Hill Road wellfield's contributing area.

SCWA and the Suffolk County Department of Health Services (SCDHS) have expressed concern that recharging 36,000 gallons per day (gpd) of treated sanitary wastewater effluent at the proposed site may impact water quality at SCWA's Laurel Hill Road wellfield in Northport (Figure 1; Table 1). As the first step in evaluating any potential impacts that the effluent recharge basin could have on the wellfield, the land surface area contributing recharge to the Laurel Hill Road wellfield was estimated, based upon the regional Suffolk County groundwater flow model previously developed in cooperation with SCDHS and SCWA.



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Laurel Hill Road Wellfield - Simulation of Potential Impact from Recharge Location Map

Figure 1

Table 1
Suffolk County Water Authority's Laurel Hill Road Wellfield – Holbrook

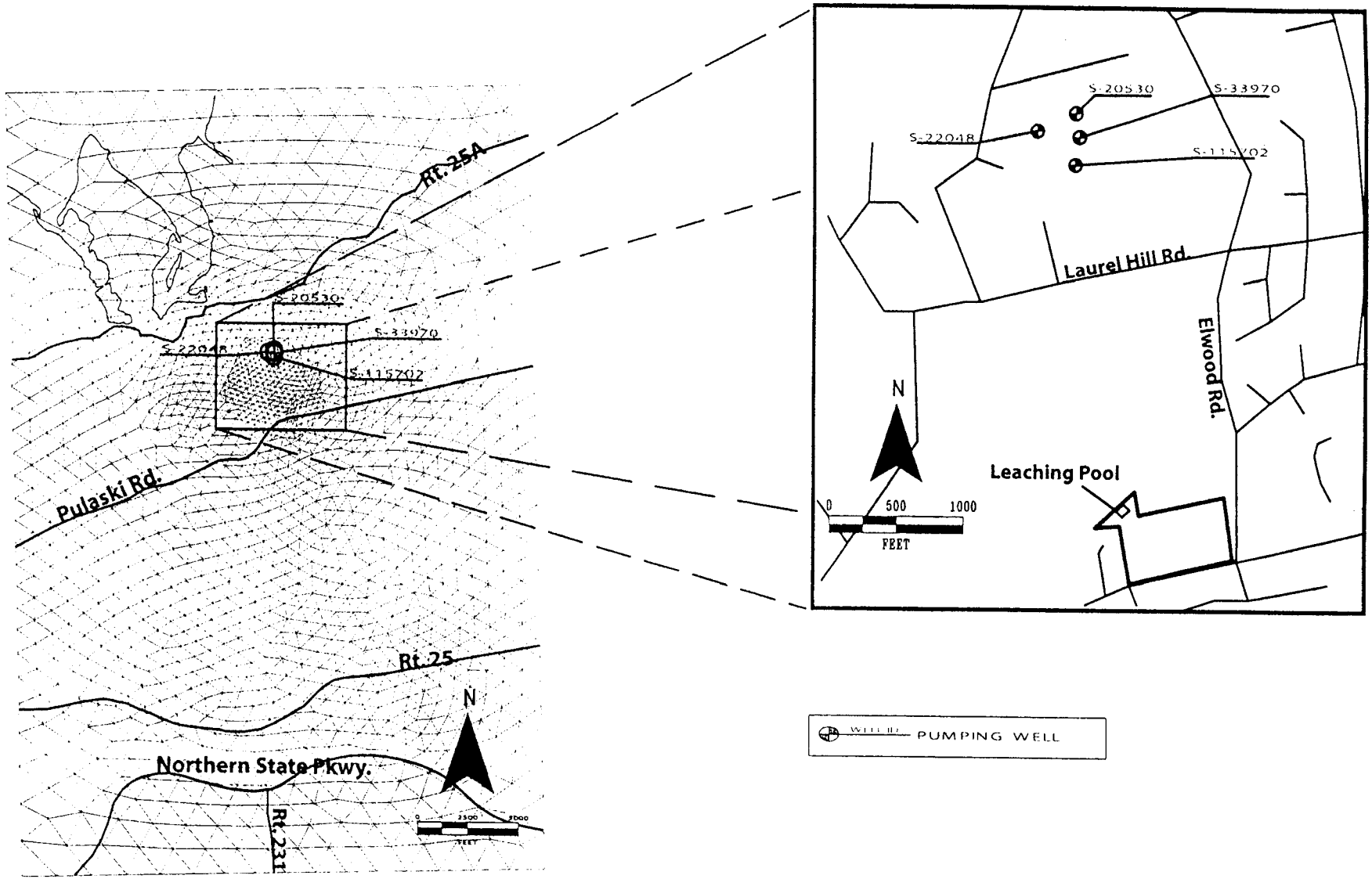
NYSDEC Well Number	SCWA Well Number	Top of Screen (ft, MSL)	Bottom of Screen (ft, MSL)	Capacity (gpm)
S-20530	1	-254.8	-332.5	1200
S-22048	2	-235.6	-314.9	1200
S-33970	3	-230.5	-294.5	1200
S-115702	4	-263.0	-323.0	1300

Model Development

The existing Suffolk County regional groundwater model has a node spacing of approximately 4,000 feet near the Laurel Hill Road wellfield. In order to estimate the contributing area with greater precision, a subregional model with much finer discretization was developed.

The hydrogeologic framework, hydrogeologic properties, boundary conditions, recharge rates, and water supply rates assigned for the Suffolk County groundwater model have been interpolated onto a subregional grid with much finer discretization (Figure 2). The subregional grid has a total of 1,768 nodes, and spacing between individual nodes ranges from less than 100 feet at the Laurel Hill Road wellfield and proposed recharge area, to approximately 1,300 feet along the perimeter of the grid.

The highly discretized model's continued ability to represent aquifer conditions at the site was checked by comparing model-simulated water levels with water levels observed at monitoring wells within the study area. The model was run under 1994 pumping and recharge conditions and the output was compared to the calibrated Suffolk County regional model (calibrated using 1994 conditions). Water table contours for both the regional and subregional models are shown on Figure 3. As shown on the figure, water table contours calculated using the subregional model are very similar to those calculated using the regional model. Also shown on the figure are several monitoring wells within the study area. The difference between the model simulated water level and the water level measured by SCDHS (March, 1994; SCDHS) is noted on the figure beneath each observation well identification number. Laurel Hill Road well number 4 (S-115702) is not shown on the figure, as it had not yet been installed in 1994.



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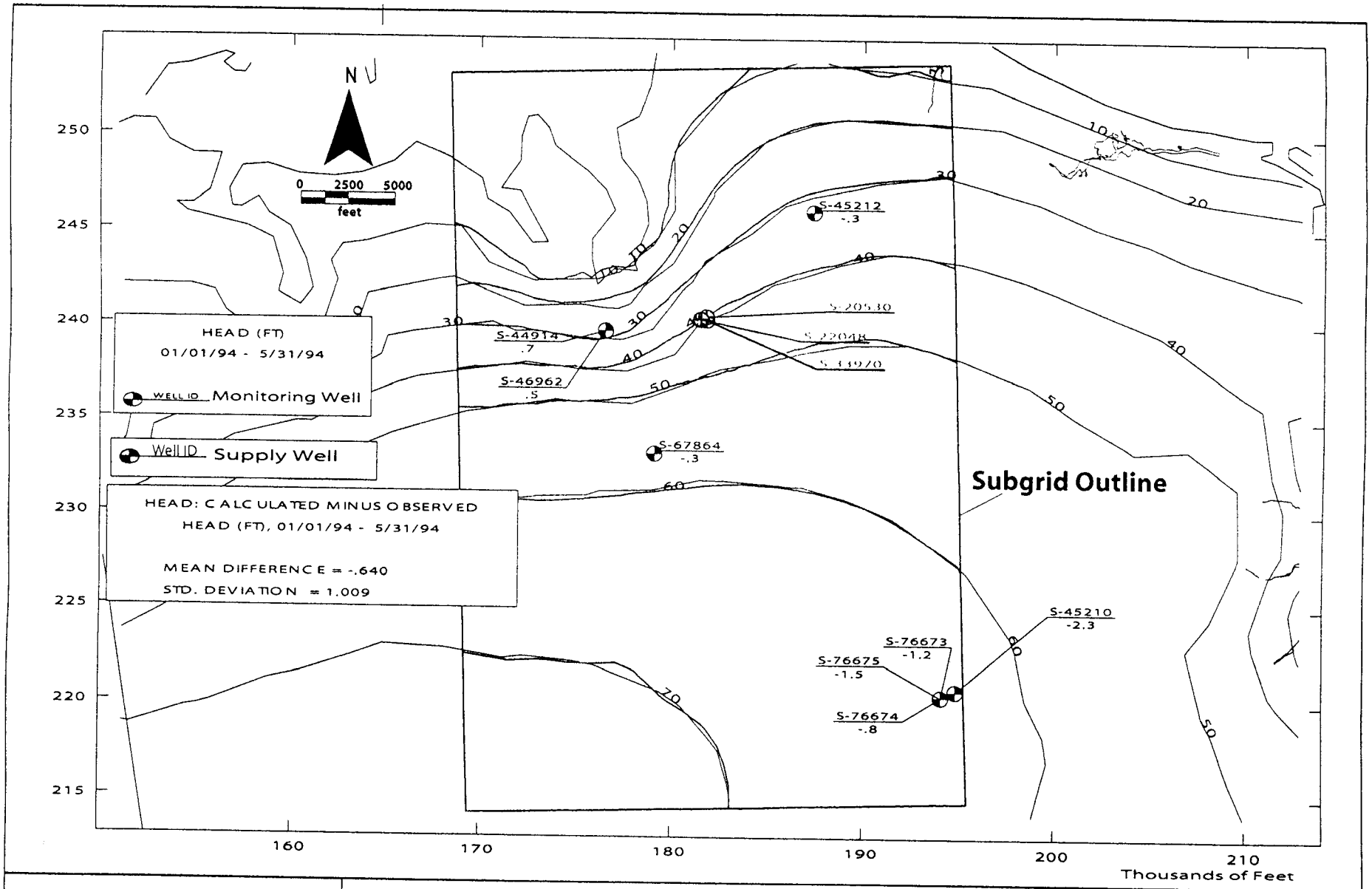
Laurel Hill Road Wellfield - Simulation of Potential Impact from Recharge

Finite Element Grid

Figure 2



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Water Table Comparison between Subregional and Calibrated Regional Model
Blue = Subregional; Red = Suffolk County Regional Groundwater Model

Figure 3

Area Contributing Recharge to the Laurel Hill Road Wellfield

The subregional model was used to simulate the steady-state flow field using long term average conditions of precipitation and recharge and average annual water supply pumping rates at supply wells nearby to the Laurel Hill Road wellfield. Water supply pumping rates at Laurel Hill Road wellfield were simulated at one half the capacity of each well (Table 2). Recharge to the aquifer was calculated from precipitation measurements recorded at Brookhaven National Laboratory (BNL). In addition to precipitation, approximately 85 percent of the water withdrawn from public supply wells was returned to the aquifer system as recharge from on-site wastewater disposal systems. A northwest-southeast cross-section through the Laurel Hill Road wellfield is shown on Figure 4.

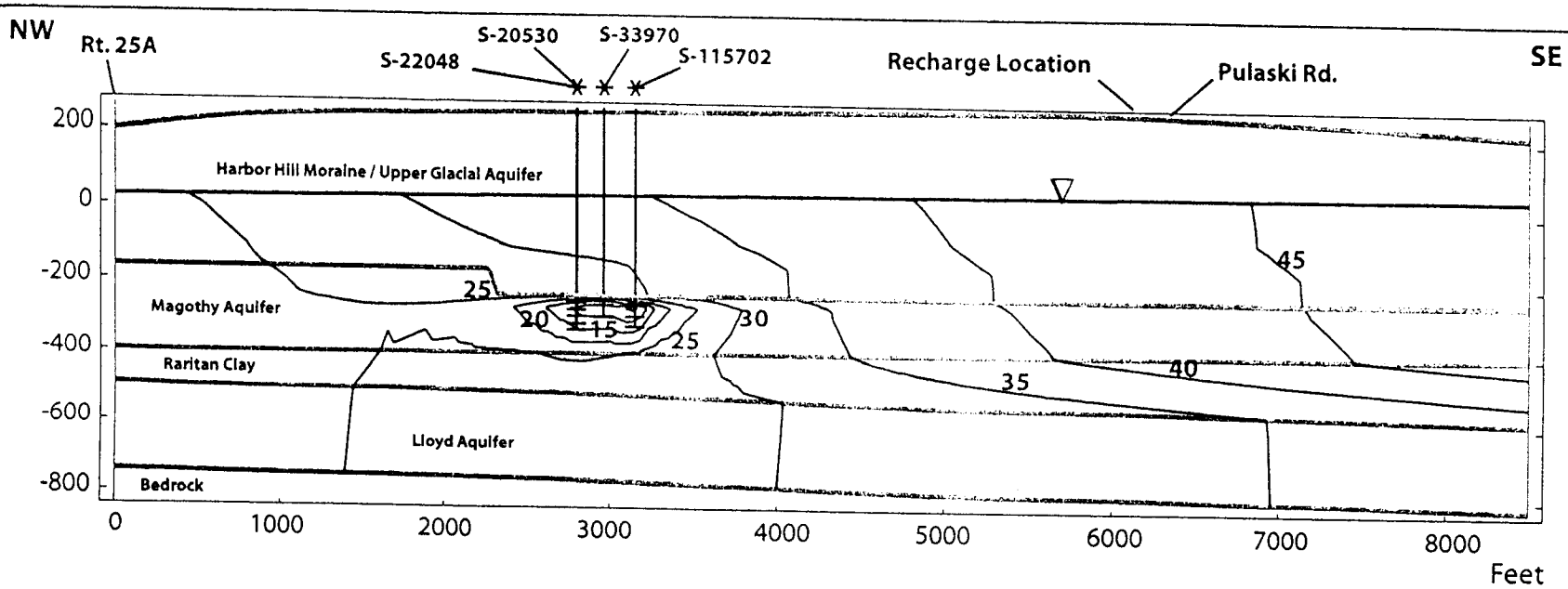
Table 2
Pumping Rates at Laurel Hill Road Wellfield[1]

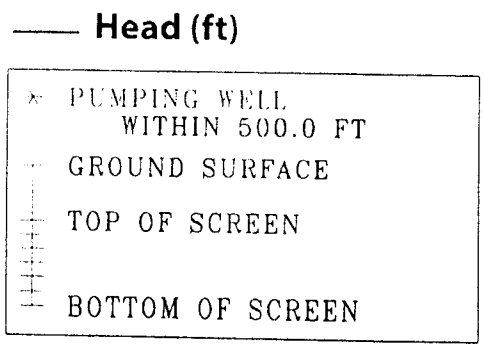
NYSDEC Well Number	Pumping Rate (gpd)
S-20530	864,000
S-22048	864,000
S-33970	864,000
S-115702	936,000

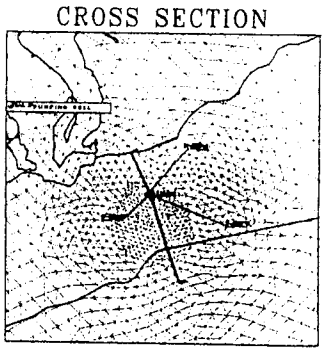
[1] As provided by Freudenthal and Elkowitz Consulting Group, Inc.

DYNTRACK, CDM's contaminant transport model, used the simulated flow field to estimate the land surface area contributing recharge to the Laurel Hill Road wellfield (not including recharge of effluent at the proposed site). The results of this baseline simulation (with Laurel Hill Road wellfield at ½ capacity) are shown on Figure 5. As shown on the figure, the south eastern corner of the housing development property falls within the wellfield's contributing area, however, the location of the proposed recharge basin is outside of the contributing area at this pumping rate. Minimum time of travel from the water table to the Laurel Hill Road wellfield is 7.92 years.

A second simulation was run in which 36,000 gallons per day (gpd) were recharged to the ground surface at the proposed recharge location. Recharge was assigned uniformly over the recharge area of 11,616 ft^2. Again, ½ capacity was used to simulate pumping at the Laurel Hill Road wellfield, while long-term average pumping rates were used for nearby supply wells. Contaminant transport modeling of the recharged effluent was conducted to simulate the migration of the effluent plume. Particles representing sanitary effluent were introduced to the water table at the recharge basin location, and a steady-state simulation tracking the migration of the hypothetical plume of treated sanitary recharge was run for 50 years. The resulting plume is shown in plan view on Figure 6 and in cross section on Figure 7. Figure 6



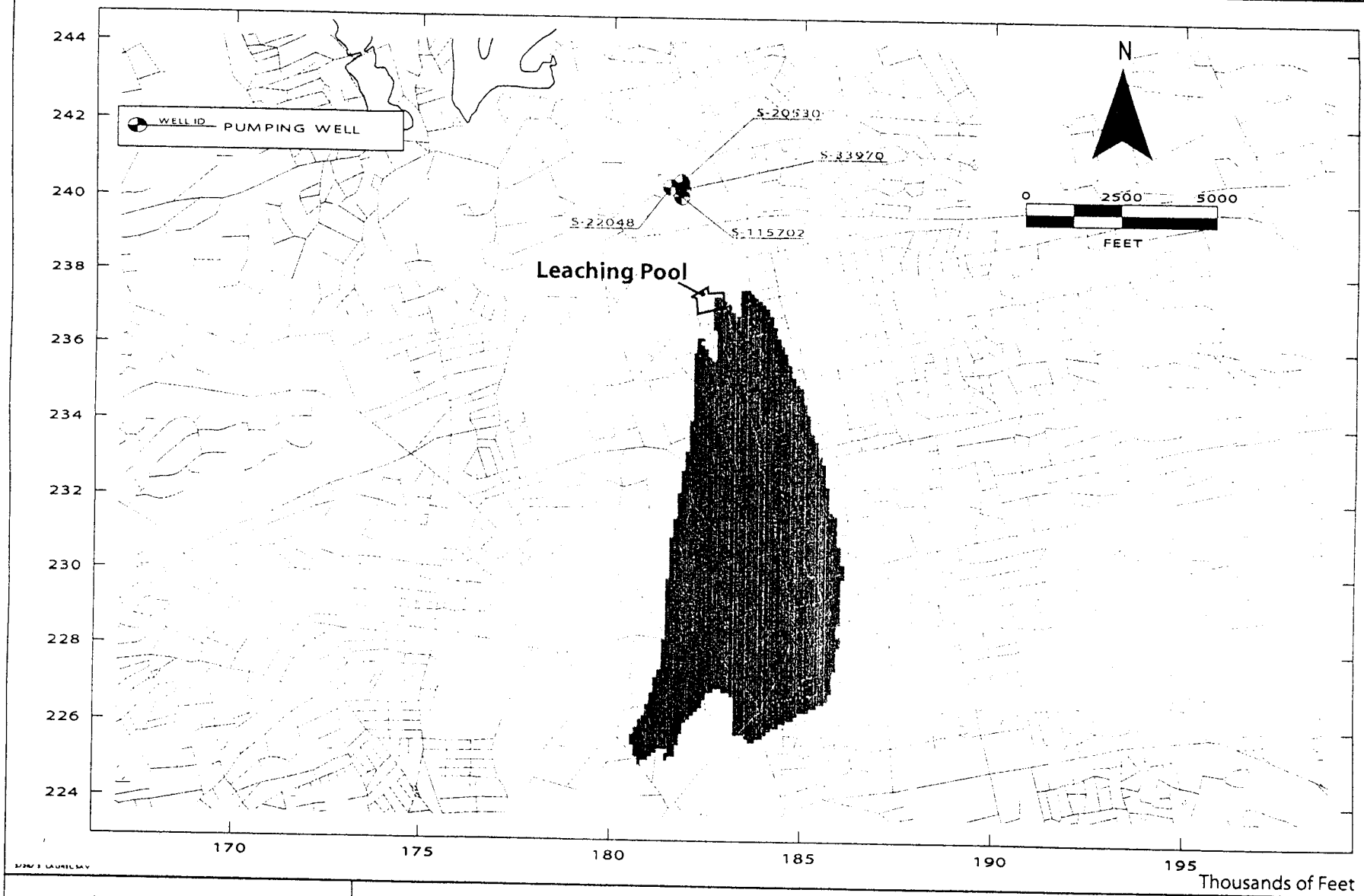




CDM

Housing Help, Inc.
Laurel Hill Road Wellfield - Simulation of Potential Impact from Recharge
NW-SE Cross Section

Figure 4



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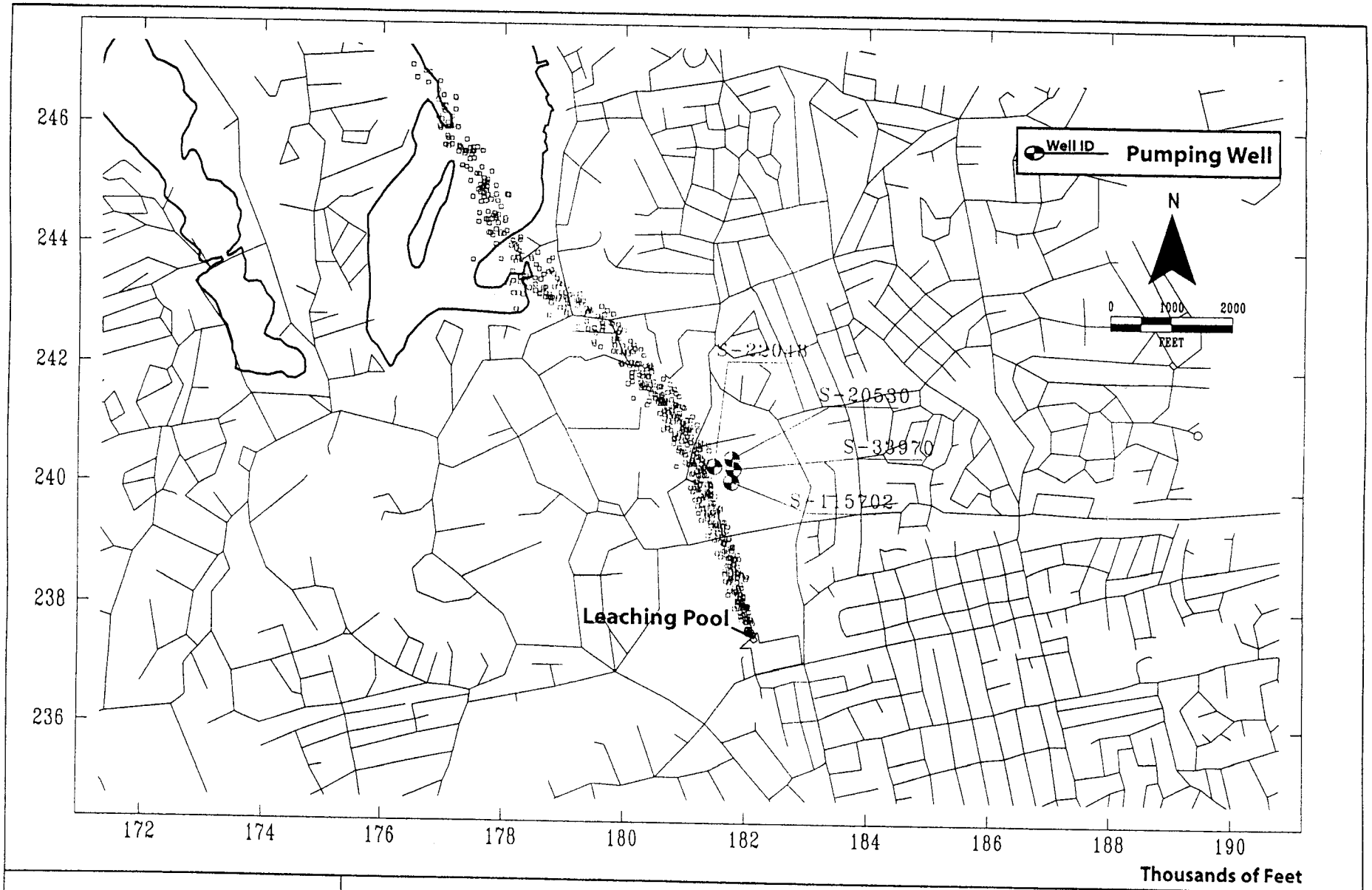
100-Year Contributing Area to Laurel Hill Road Wellfield (1/2 Capacity)

Figure 5



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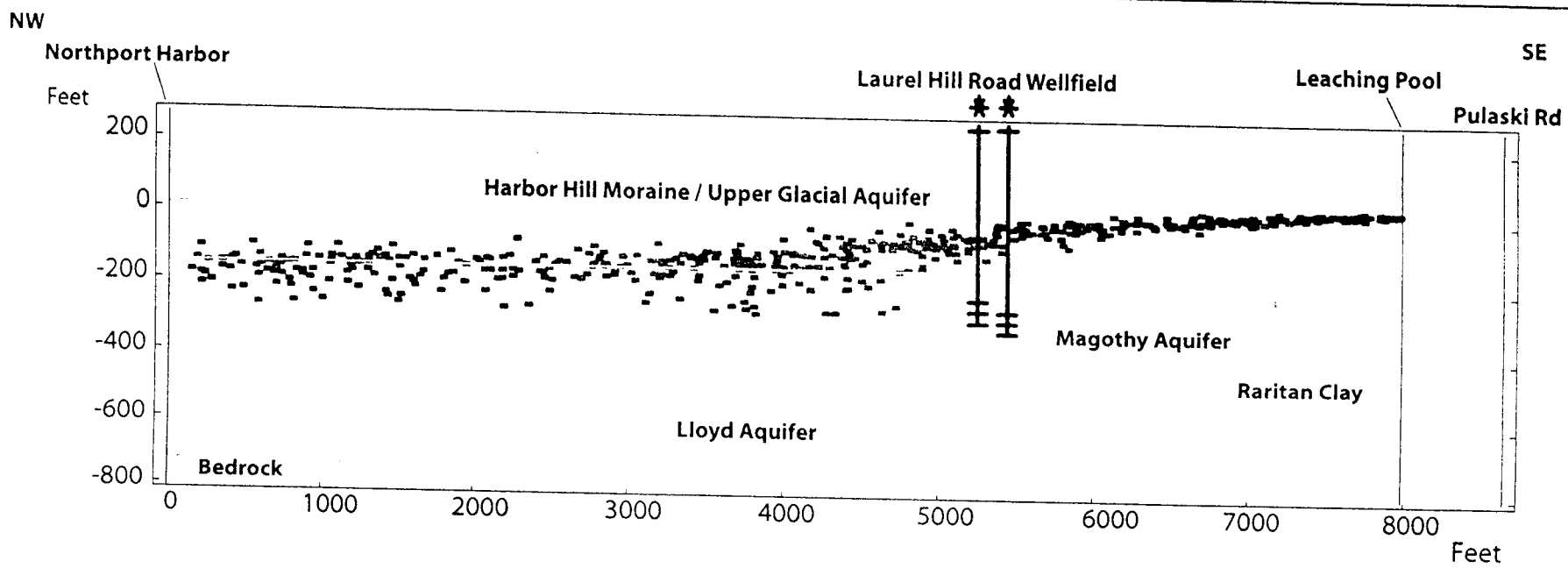
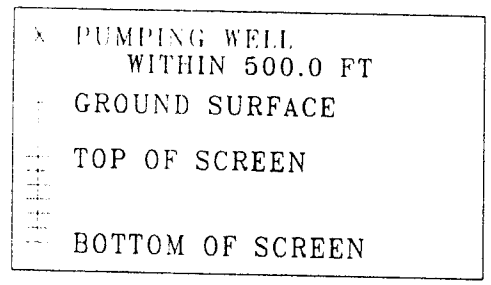
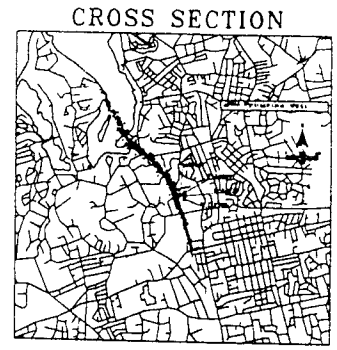
Simulated Migration of Recharge Effluent (50 years)

Figure 6







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Laurel Hill Road Wellfield - Simulated Migration of Recharge Effluent
Laurel Hill Road Wellfield Pumping at 1/2 Capacity

Figure 7

shows that the recharged effluent flows northwest, bypassing Laurel Hill Road wellfield, and discharging into Northport Harbor. With the Laurel Hill Road wellfield pumping at ½ capacity, the effluent plume travels primarily within the upper glacial aquifer, well above the screened interval of the Laurel Hill Road wellfield wells, but reaches the upper portions of the Magothy aquifer as the plume travels further north as shown on Figure 7.

A third simulation was conducted using average pumping rates at the Laurel Hill Road wellfield. Pumping rates corresponded with those used in the New York State Source Water Assessment Program (SWAP). Pumping rates are shown in Table 3 and the resulting contributing area is shown on Figure 8. As shown on the figure, the contributing area to the wellfield is considerably smaller and is approximately 5,000 feet south of the recharge location. The minimum time of travel to the wellfield is 19.59 years. The recharge effluent again travels northwest, but remains entirely in the upper glacial aquifer (Figure 9).

Table 3
Average Pumping Rates at the Laurel Hill Road Wellfield

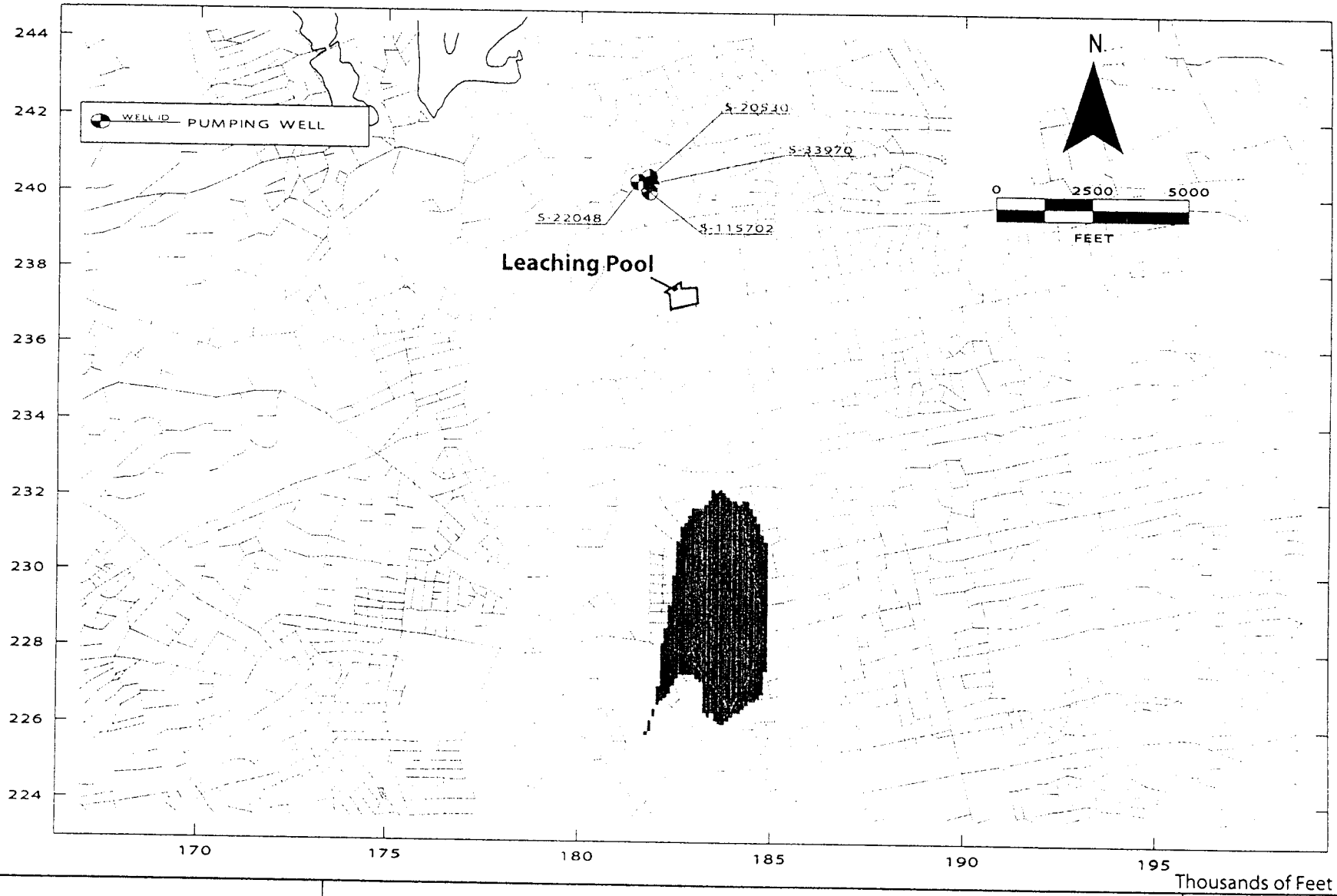
NYSDEC Well Number	Pumping Rate (gpd)
S-20530	313,471
S-22048	318,926
S-33970	319,070
S-115702	371,926

Conclusions

The area estimated to contribute recharge to the Laurel Hill Road wellfield is very sensitive to water supply pumping rates at the wellfield. The results of this analysis are summarized below.

- Under assumed peak conditions of water supply pumping (1/2 capacity) at SCWA's Laurel Hill Road wellfield, the wellfield's contributing area includes southeast corner of the housing development, but the recharge basin lies outside the contributing area, just to the northwest. The additional 36,000 gpd of recharge added at the new recharge area has little effect on the capture zone area of the Laurel Hill Road well filed.

- Contaminant migration analyses show that the hypothetical plume of treated sanitary effluent will not impact the Laurel Hill Road wellfield at peak water supply pumping rates. The plume travels in a northwesterly direction, eventually discharging into



CDM

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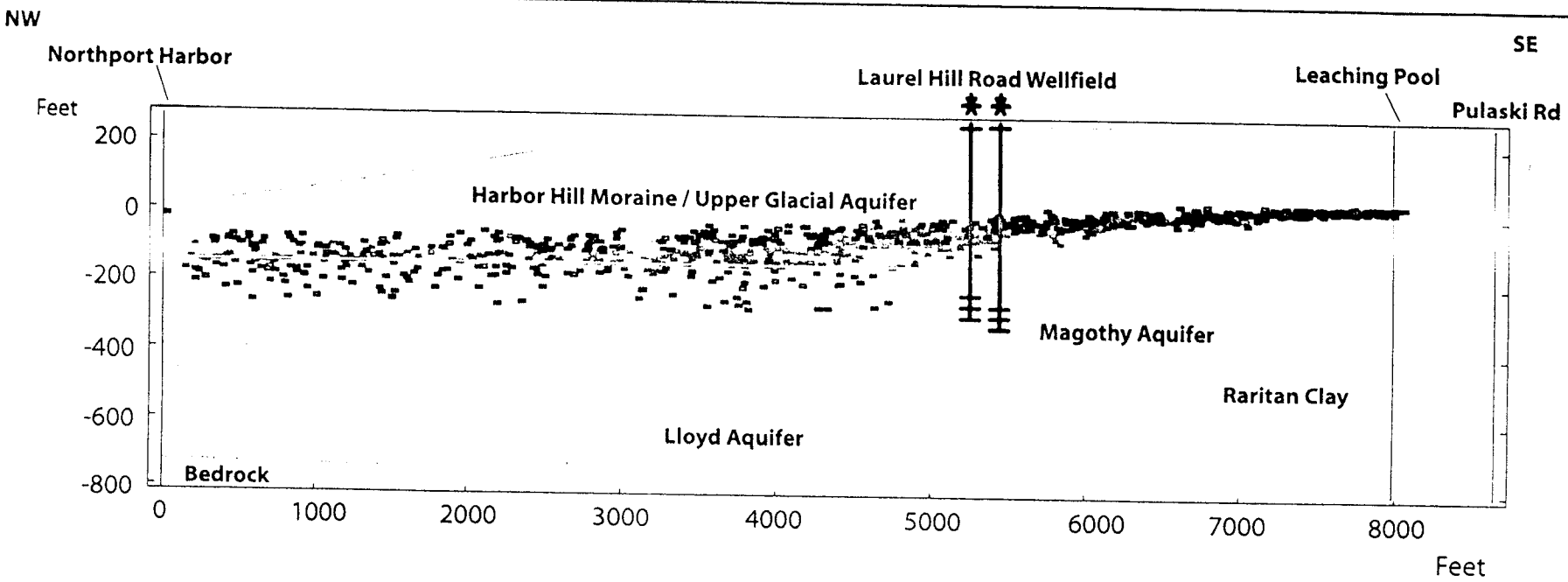
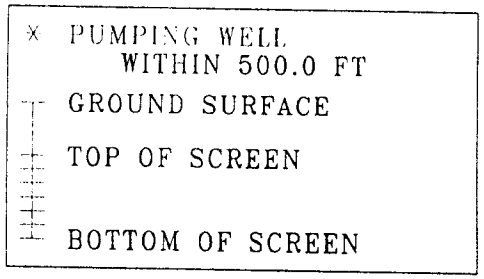
100-Year Contributing Area to Laurel Hill Road Wellfield (Average Pumping)

Figure 8



Particle Migration under Average Pumping Conditions

Particle Migration - Pumping = 1/2 Capacity



CROSS SECTION

CDM

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Laurel Hill Road Wellfield - Simulated Migration of Recharge Effluent Pumping at 1/2 Capacity and Long-Term Average Conditions

Figure 9

- Northport Harbor. The simulated effluent plume migrates into the upper-most portions of the Magothy aquifer. The minimum time of travel from the water table to the wellfield is 7.92 years.

- Under average conditions of water supply pumping at the Laurel Hill Road wellfield, and long-term average recharge rates, the recharge area is outside the wellfield's contributing area (approximately 5,000 feet north), and the minimum time of travel from the water table to the wellfield is 19.59 years. The hypothetical effluent plume remains within the upper glacial aquifer.

APPENDIX D

PUMP PERFORMANCE CURVES

INFLUENT PUMPS

FLYGT	PERFORMANCE CURVE	PRODUCT FP3085.182	TYPE LT
DATE 2002-02-04	PROJECT MATINECOCK COURT STP	CURVE NO 63-491-00-5391	ISSUE 1

	1/1-LOAD	3/4-LOAD	1/2-LOAD
MOTOR COS PHI	0.83	0.77	0.66
MOTOR EFFICIENCY	77.5 %	78.5 %	76.5 %
GEAR EFFICIENCY	---	---	---

MOTOR SHAFT POWER	3	hp
STARTING CURRENT ...	22	A
RATED CURRENT ...	4.3	A
RATED SPEED	1700	rpm
TOT.MOM.OF INERTIA ...	0.028	kgm2
NO. OF BLADES		

IMPELLER DIAMETER: 200 mm

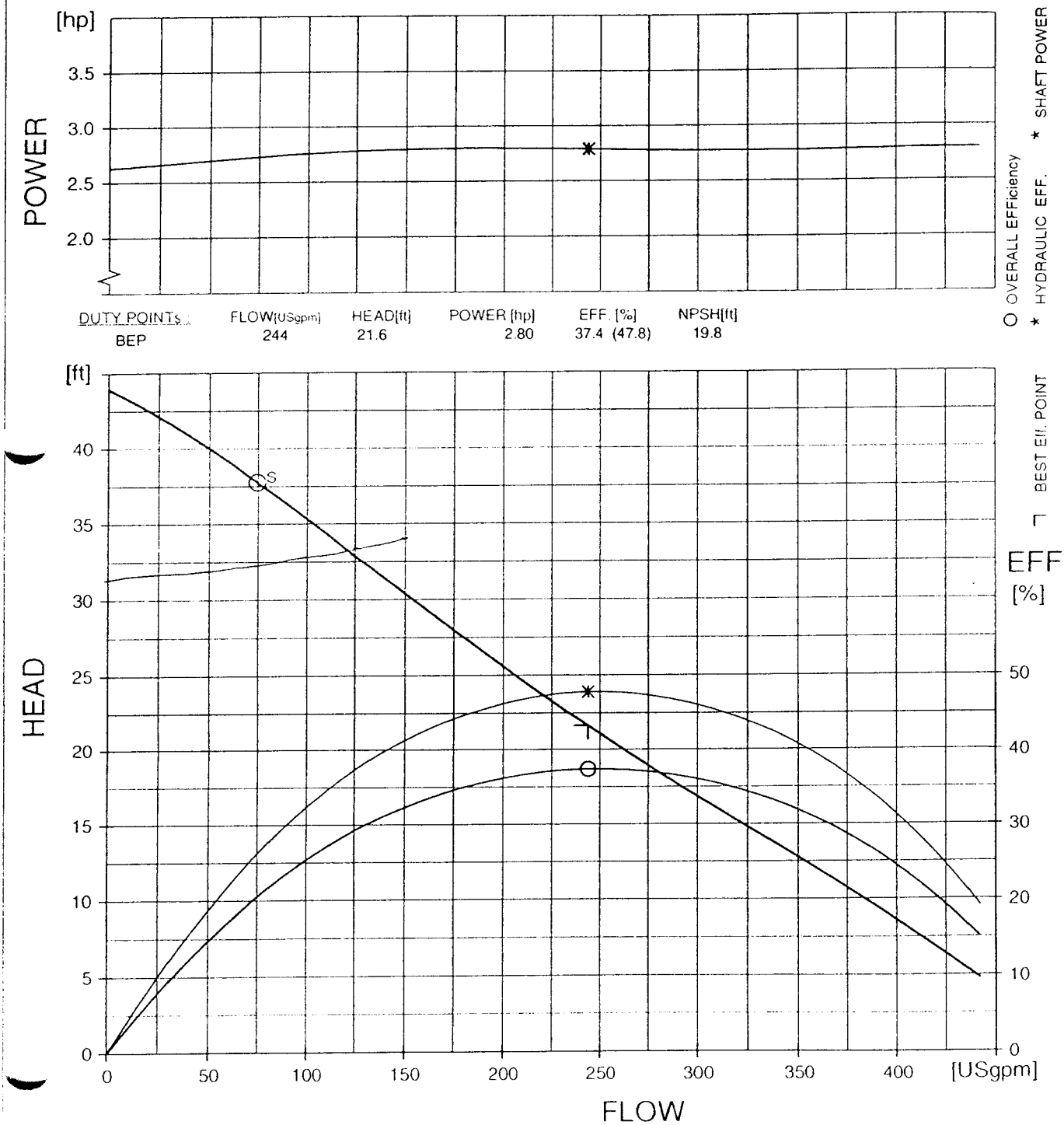
MOTORTYPE	STATOR	REV
15-10-4AL	12YSER	10

FREQ.	PHASES	VOLTAGE	POLES
60 Hz	3	460 V	4

GEARTYPE	RATIO
---	---

COMMENTS
IMP.DIAM.200 MM
IMP. HEIGHT 49 MM

INLET/OUTLET: - /100 mm
IMP. THROUGHLET: ---



DUTY POINTs	FLOW[USgpm]	HEAD[ft]	POWER [hp]	EFF. [%]	NPSH[ft]
BEP	244	21.6	2.80	37.4 (47.8)	19.8

S: RISK OF SEDIMENTATION AT VELOCITY BELOW 0.6 m/s
(Point (S) show risk in a 100 mm pipe)

FLYGT CURVE

EQUALIZATION PUMPS

FLYGT	PERFORMANCE CURVE	PRODUCT CP3085.182	TYPE LT
DATE 2002-02-04	PROJECT MATINECOCK COURT STP	CURVE NO 63-414-00-5310	ISSUE 1

	1/1-LOAD	3/4-LOAD	1/2-LOAD
MOTOR COS PHI	0.83	0.77	0.66
MOTOR EFFICIENCY	77.5 %	78.5 %	76.5 %
GEAR EFFICIENCY	---	---	---

MOTOR SHAFT POWER	3	hp
STARTING CURRENT ...	22	A
RATED CURRENT ...	4.3	A
RATED SPEED	1700	rpm
TOT.MOM.OF INERTIA ...	0.023	kgm2
NO. OF BLADES	1	

IMPELLER DIAMETER: 183 mm

MOTORTYPE	STATOR	REV
15-10-4AL	12YSER	10

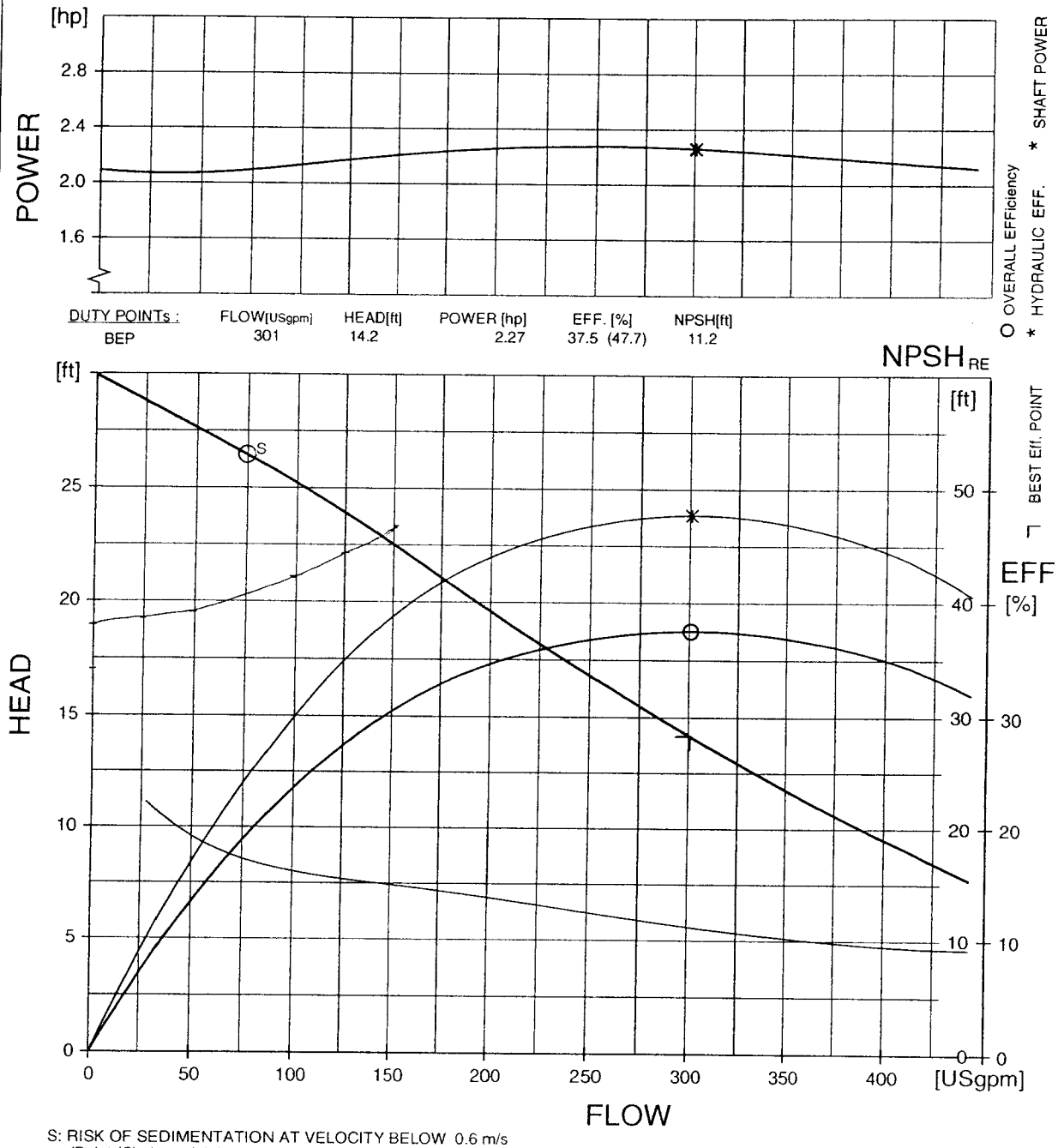
FREQ.	PHASES	VOLTAGE	POLES
60 Hz	3	460 V	4

GEARTYPE	RATIO
---	---

COMMENTS

INLET/OUTLET: - /100 mm

IMP. THROUGHLET: 80 mm



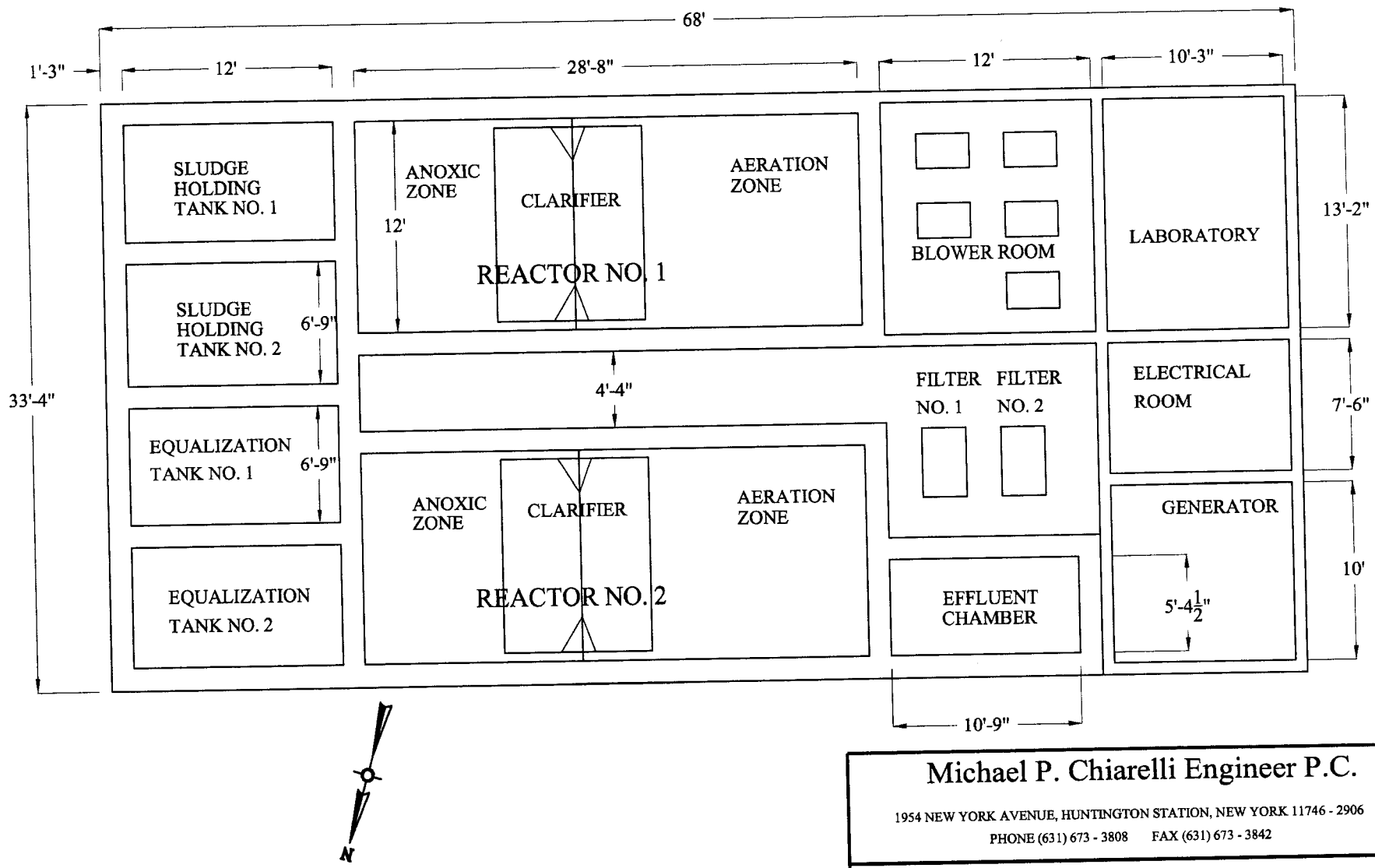
DUTY POINTs :	FLOW[USgpm]	HEAD[ft]	POWER [hp]	EFF. [%]	NPSH[ft]
BEP	301	14.2	2.27	37.5 (47.7)	11.2

S: RISK OF SEDIMENTATION AT VELOCITY BELOW 0.6 m/s
(Point (S) show risk in a 100 mm pipe)

CURVES SHOW PERFORMANCE WITH CLEAR COLD WATER

FLYGT CURVE

DRAWINGS



Michael P. Chiarelli Engineer P.C.

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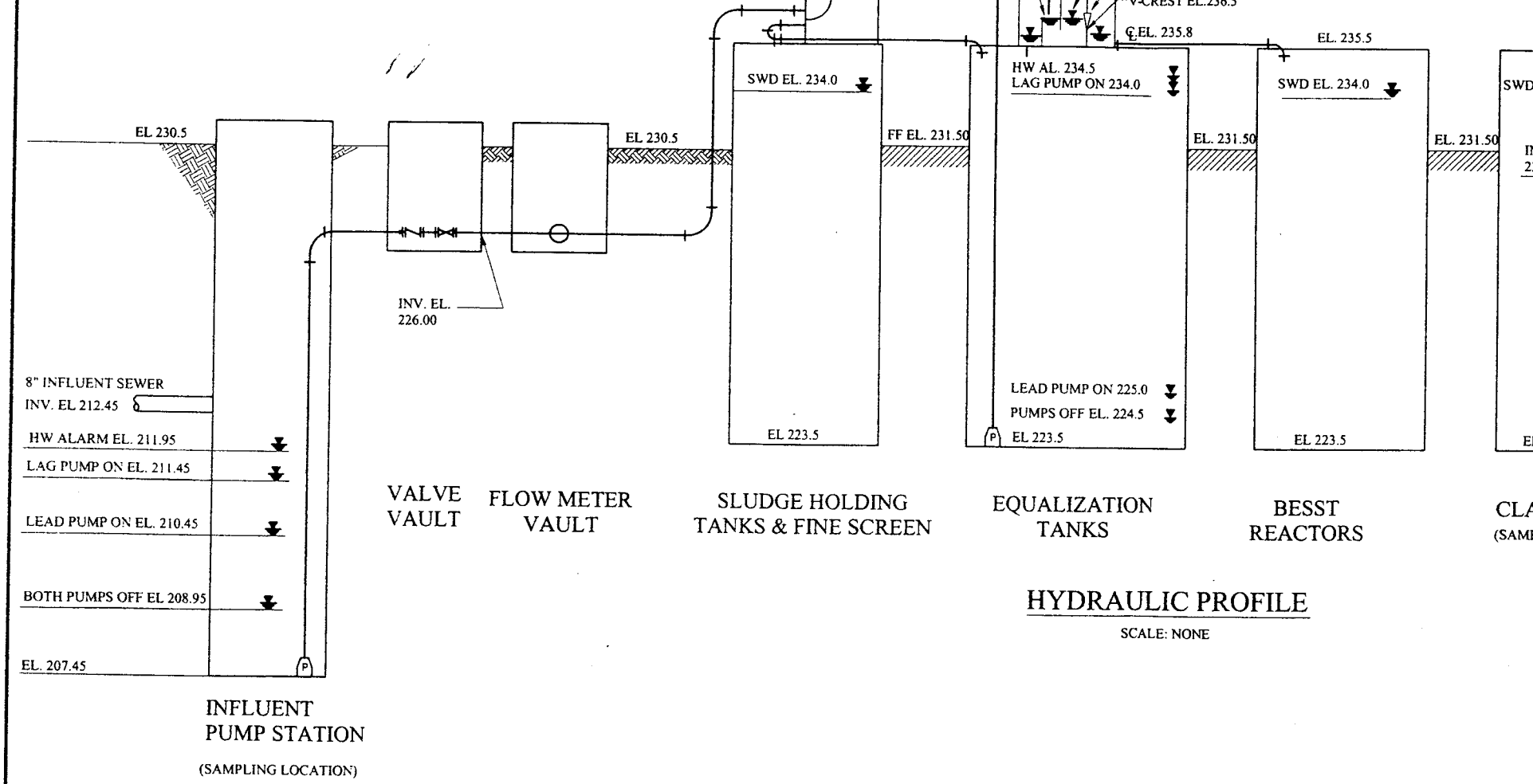
MATINECOCK COURT
GREENLAWN, NEW YORK
SEWAGE TREATMENT PLANT - ENGINEERING REPORT

FLOOR PLAN

DWG.SCALE: N.T.S	DRAWN BY: YK/CM	PROJECT NO. 178-002-15	DWG. NO: 3
DRAWN BY: YK/CM	CHECKED BY: YK/MPC	DATE: 03-02-04	



HYDRAULIC PROFILE

SCALE: NONE

COUNTY OF SUFFOLK

RECEIVED
JUL 7 2004
MICHAEL P. CHIARELLI
ENGINEER, P.C.

STEVE LEVY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF PUBLIC WORKS

RICHARD J. LAVALLE, P.E.
CHIEF DEPUTY COMMISSIONER

CHARLES J. BARTHA, P.E.
COMMISSIONER

LESLIE A. MITCHEL
DEPUTY COMMISSIONER

MEMORANDUM

TO: Legislators Alden, Binder, Bishop, Caracappa, Caracciolo, Carpenter, Cooper, Crecca, Fisher, Foley, Lindsay, Losquadro, Montano, Mystal, Nowick, O'Leary, Schneiderman and Tonna
Roger Podd, County Executive Assistant
William Faulk for Joseph Caracappa, Presiding Officer
Vito Minei, P.E., Director, Environmental Quality, S.C. Health Services
Thomas Isles, Director, Suffolk County Planning Department

FROM: Charles J. Bartha, P.E., Commissioner, SCDPW
& Chairman, Suffolk County Sewer Agency

DATE: July 21, 2004

SUBJECT: **MINUTES OF THE SEWER AGENCY MEETING OF JULY 19, 2004**

Attached for your information please find a copy of the minutes for the above referenced meeting.

Charlie

CJB/BW/bc
Attachments
cc: Richard J. LaValle, P.E., Chief Deputy Commissioner
Leslie Mitchel, Deputy Commissioner
Ben Wright, P.E., Chief Engineer, Division of Sanitation
Bob Carballeira, P.E., Associate Civil Engineer
John Donovan, P.E., Sr. Civil Engineer
Laura Conway, C.P.A., Exec. Assist. For Finance & Administration
Marisa Marletti, Esq., Dept. of Law
Walter Hilbert, P.E., S.C. Dept. of Health
Walter Dawydiak, P.E., S.C. Dept. of Health
Henry Barton, Clerk of the Legislature
William Spitz, NYSDEC

Motion was passed unanimously to table the conceptual certification for one month.

NEW BUSINESS

CONCEPTUAL CERTIFICATION

MATINECOCK COURT **HU-1398**

Bob mentioned that this project is a proposed 155 unit low income housing subdivision consisting of 77 condominiums and 78 apartments and a community center situated on 14.574 acres located on the northwest corner of Pulaski Road and Elwood Road in Greenlawn.

The project has not completed SEQRA and the developer requests **Conceptual Certification** to build an on-site STP for the estimated flow of 36,000 GPD. There is no County sewer district in the vicinity of this project.

Staff recommends granting conceptual certification.

Ben asked for the representative of the project and Mr. Michael Chiarelli said that he was and he introduced Susan Lagville, the Executive Director for Housing Help, Inc.
Mr. Chiarelli mentioned that the facts presented were correct and that the STP at Paumanack Village on Pulaski did not have capacity and it was a HUD project, which would present similar problems that were encountered at the Cabrini Gardens. The only other treatment plant in the vicinity is the VA STP, and that is too far away.

Roger Podd made a motion to grant the conceptual certification and Walter Dawydiak seconded it. Motion passed unanimously (SCSA Resolution 22-2004)

ARROW PARCEL STP **BR-1410**

Bob mentioned that the Developer, Dorade, Inc. is requesting **Conceptual Certification** for a proposed construction and operations and maintenance of a sewage treatment facility to process the sewage discharged from the following locations:

Dorade (Existing Whispering Pines Subdivision)	106,000
SCSD # 8 - Strathmore Ridge	50,000
Brookhaven Walk	55,000

The plant is to be designed for a capacity of 225,000 gpd and is proposed to be located in a 14 acre parcel on the southwest corner of the Long Island Expressway and the William Floyd Parkway, just north of the Long Island Railroad.

The construction of this facility will allow the developer to retire and abandon the existing sewage treatment plant that has been treating the wastes from the Whispering Pines and SCSD #8, Strathmore Ridge. The Dorade sewage treatment plant, as it is known, is in serious disrepair. The change of location would also remove this treatment facility from Pine Barrens recharge area but would move it closer to the area of the Carmans River

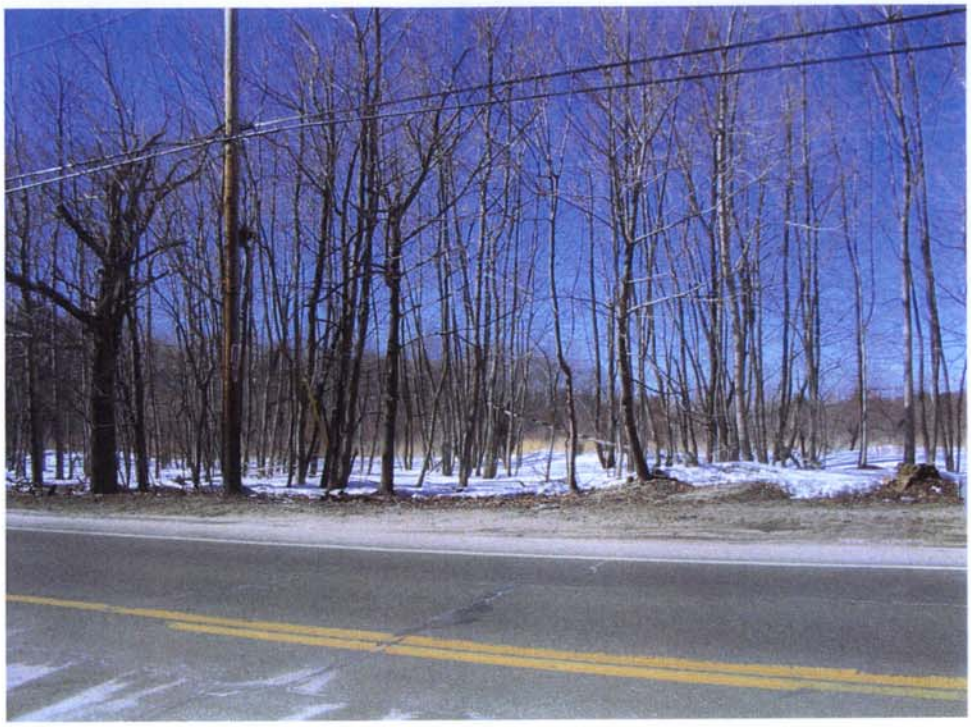
APPENDIX K

<u>Photograph No. 1:</u> View of the northern portion of the subject property, facing west from Elwood Road.

<u>Photograph No. 2:</u> View of the southerly portion of the subject property, facing west from Elwood Road.

<u>Photograph No. 3:</u> View of the easterly portion of the subject property, facing north from Pulaski Road.

<u>Photograph No. 4:</u> View of the subject property, facing northwest from the intersection of Elwood and Pulaski Roads.



<u>Photograph No. 5:</u> View of the westerly portion of the subject property, facing north from Pulaski Road.

<u>Photograph No. 6:</u> View of the vegetation present on the southwest portion of the subject property.

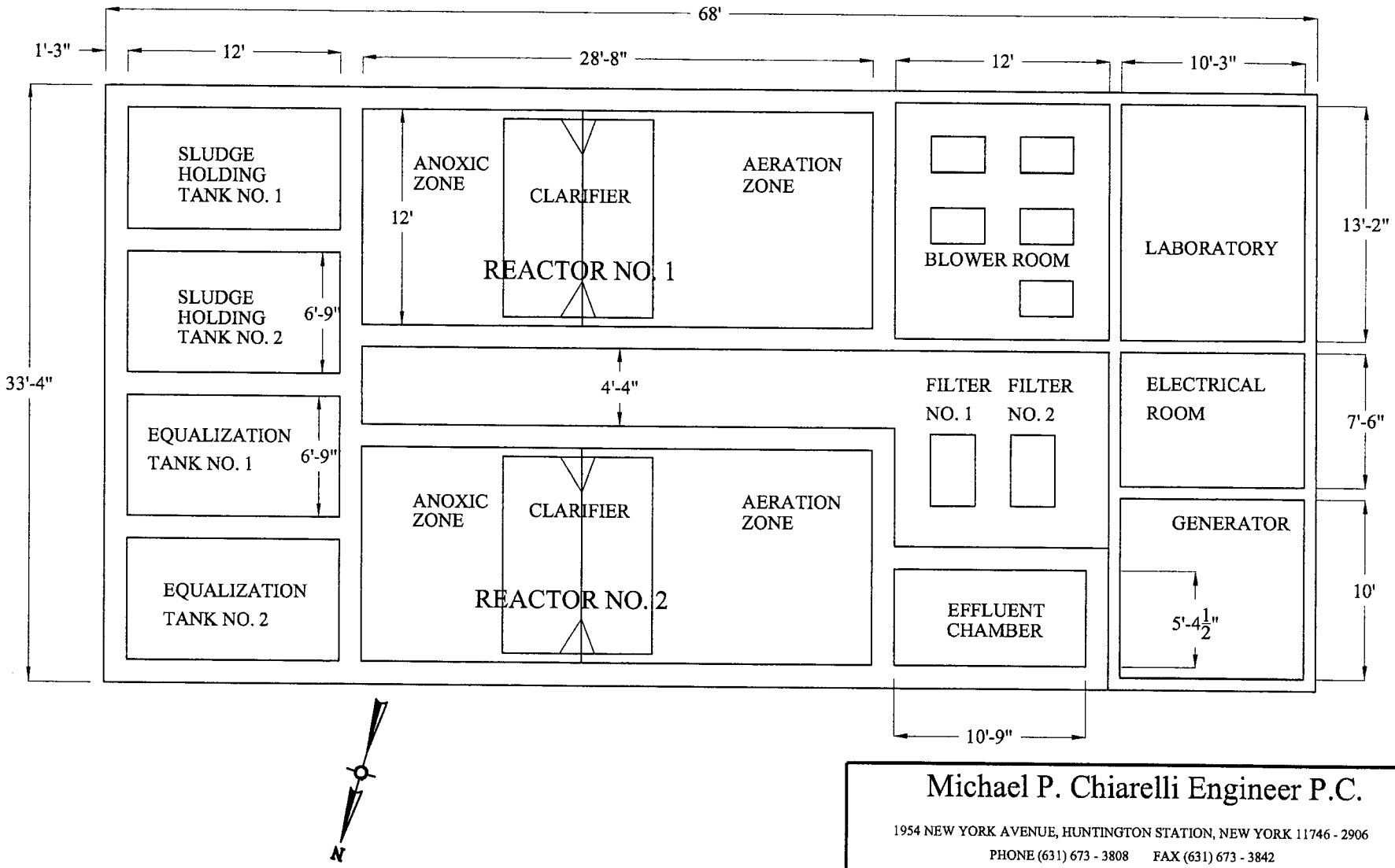
<u>Photograph No. 7:</u> View of the northeast portion of the subject property and the LIPA substation beyond, from Elwood road.

<u>Photograph No. 8:</u> View facing east from the subject property across Elwood Road.

<u>Photograph No. 9:</u> View facing east from the subject property across Elwood Road.

<u>Photograph No. 10:</u> View of development along the south side of Pulaski Road, facing southeast from the subject property.

<u>Photograph No. 11:</u> View of residential development along the south side of Pulaski Road, Facing south from the subject property.



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SEWAGE TREATMENT PLANT - ENGINEERING REPORT

FLOOR PLAN

DWG.SCALE: N.T.S	DRAWN BY: YK/CM	PROJECT NO. 178-002-15	DWG. NO: 3
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S:\JOBS 2002 Autocad Files\178a Housing Help Inc\178-002-15 Matinecock Court - STP Rpt\3-02-04 report dwgs\03-02-04 Floor Plan.dwg, Layout1, 12/16/2005 4:12:02 PM, 1:1